

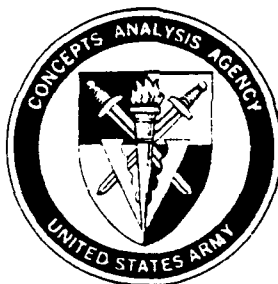
RESEARCH PAPER
CAA-RP-90-04

AD-A220 426

A COMPILATION OF DATA ON RATES OF
ADVANCE IN LAND COMBAT OPERATIONS

FEBRUARY 1990

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8120 Woodmont Avenue
Bethesda, MD 20814-2797**

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19. ABSTRACT (continued)

The 1989-1990 Secretary of the Army Fellowship awarded to Dr. Robert L. Helmbold calls for conducting an investigation into the distances, durations, and rates of advance of land combat forces. The work consists of four phases. The first phase was devoted to assembling as much of the existing statistical data on historical rates of advance as possible, and to computerizing the data. The second phase consists of a comprehensive survey and critical review of the assembled literature to identify trends, omissions and gaps, and to provide a comparative analysis and assessment of its conclusions and findings. The third phase will consist of original statistical and other analyses of the assembled data. The fourth and final phase will involve reporting the results.

A COMPILATION OF DATA ON RATES OF ADVANCE IN LAND COMBAT OPERATIONS



February 1990

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PREFACE

The 1989-1990 Secretary of the Army Fellowship awarded to Dr. Robert L. Helmbold calls for conducting an investigation into the distances, durations, and rates of advance of land combat forces. The work consists of four phases. The initial phase was devoted to assembling as much of the existing statistical data on historical rates of advance as possible. It also included computerizing the data. The second phase consists of a comprehensive survey and critical review of the assembled literature to identify trends, omissions and gaps, and to provide a comparative analysis and assessment of its conclusions and findings. The third phase will consist of original statistical and other analyses of the assembled data. The fourth and final phase will involve reporting the results. The anticipated schedule is as follows:

<u>Phase</u>	<u>Anticipated Completion</u>
First	December 1989
Second	February 1990
Third	May 1990
Fourth	July 1990

This Research Paper compiles the noteworthy statistical data that (i) has been tabulated or listed in convenient form and (ii) appears to lend itself to quantitative analysis of the principal factors governing rates of advance. It is the second paper to appear under this Fellowship, the first having been "A Survey of Past Work on Rates of Advance in Land Combat Operations," CAA-RP-90-03, February 1990. We plan a third on the quantitative analysis of these data.

We are not aware of any other work that covers this area in the depth to which this Research Paper does. Thus, it is a useful basic reference, summarizing the important statistical data on rates of advance. As such, it provides a valuable resource for current and future work in this important field of investigation. Wide dissemination will make this information available to others for study and analysis.



REPLY TO
ATTENTION OF:

CSCA-MVM

DEPARTMENT OF THE ARMY

US ARMY CONCEPTS ANALYSIS AGENCY
8120 WOODMONT AVENUE
BETHESDA, MARYLAND 20814-2797



02 FEB 1990

MEMORANDUM FOR Deputy Under Secretary of the Army (OR), Washington, DC 20310

SUBJECT: A Compilation of Data on Rates of Advance in Land Combat Operations

1. The U.S. Army Concepts Analysis Agency (CAA) is pleased to host and support our Secretary of the Army Research and Study Fellow for 1989-1990, Dr. Robert L. Helmbold, who won this Fellowship with an excellent proposal for research on rates of advance in land combat operations. This Research Paper surveys the available statistical data on rates of advance. He plans to use these data to study the principal factors governing rates of advance. It is the second paper to appear under this Fellowship (the first having been "A Survey of Past Work on Rates of Advance in Land Combat Operations," CAA-RP-90-03, February 1990) and we anticipate it will be followed by another analyzing these data.

2. We are not aware of any other work that covers this area as thoroughly as this Research Paper does. Thus, it provides the Army with a useful basic reference, collecting in one place essentially all of the important statistical data currently available. As such, it furnishes a valuable resource for current and future work in this important field of investigation. Wide dissemination will make this work available to others for study and analysis. Questions or inquiries should be directed to the Office of Special Assistant for Model Validation, U. S. Army Concepts Analysis Agency (CSCA-MVM), 8120 Woodmont Avenue, Bethesda, MD 20814-2797, (301) 295-5228.

E. B. VANDIVER III
Director

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A COMPILATION OF DATA ON RATES OF ADVANCE IN LAND COMBAT OPERATIONS

SUMMARY
CAA-RP-90-4

THE REASON FOR PERFORMING THIS STUDY was that a systematic compilation and description of the available statistical data is needed for work on rates of advance. Unfortunately, these data are widely scattered and often hard to get. We are not aware of any other work that covers this area as thoroughly as this Research Paper does.

THE STUDY SPONSOR was the Secretary of the Army. This is the second paper to be prepared by Dr. Robert L. Helmbold under his Secretary of the Army Research and Study Fellowship, and a third on the analysis of these data is planned.

THE STUDY OBJECTIVE was to provide the Army with a useful compilation and description of the important statistical data on rates of advance in land combat operations. This compilation makes them conveniently available to military historians and operations researchers. As such, it furnishes a valuable resource for further work in this important field.

THE SCOPE OF THE STUDY was intended to be comprehensive, in the sense of including all of the noteworthy work in this area. It is, no doubt, too much to hope that the paper includes literally all of the useful data. Nevertheless, this compilation should be very helpful to military historians and operations researchers. Counting earlier statistical tabulations that it includes or supersedes, over 30 databases are encompassed by those given in Appendix A. In addition, some anecdotal information that did not lend itself to statistical tabulation is provided in Appendix B.

THE MAIN ASSUMPTION of this paper is that no work that would substantially alter its principal findings has been overlooked.

THE BASIC APPROACHES used in this study were:

- a. To obtain through extensive personal visits, correspondence, and phone calls all of the noteworthy documents with statistical data on rates of advance, and then to
- b. Compile, computerize, describe, critique, and comparatively review them.

THE PRINCIPAL FINDINGS of the work reported herein are:

- a. A lot of statistical data on rates of advance in land combat operations is available.
- b. Some past work uses *ad hoc* descriptors and terminology. This makes comparisons difficult.
- c. Some past work made mistakes in figuring elapsed times from calendar dates and/or times of day; some even made mistakes in computing rates from distances and elapsed times.
- d. Appreciable difficulties for future quantitative work have been created by the use of subjective/qualitative descriptors not defined in terms of objectively measurable quantities (e.g., the use of such subjective/qualitative descriptors as "intensity of enemy opposition," "degree of difficulty of the terrain," and the like).

e. Several sources, some intentionally and others unintentionally, tended to select cases of a successful advance by the attacker. This biases the data against successful defensive efforts and in favor of advances by attackers.

f. Reported distances usually are shorter than the actual distances moved, because reported distances tend to be:

- (1) From point to point rather than along the actual paths taken, or
- (2) For displacements of the front line and not of the units involved.

g. Reported times usually are longer than the times actually "in motion," because reported times tend to:

- (1) Include pauses and halts, and to be
- (2) Rounded up to whole days.

h. Because of the tendency for reported distances to be shorter and times longer than actual, rates based on them tend to be lower than actual rates of advance.

THE STUDY EFFORT was directed by Dr. Robert L. Helmbold, Office, Special Assistant for Model Validation.

COMMENTS AND SUGGESTIONS may be sent to the Director, US Army Concepts Analysis Agency, ATTN: CSCA-MV, 8120 Woodmont Avenue, Bethesda, Maryland, 20814-2797.

Tear-out copies of this synopsis are at back cover.

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STUDY SUMMARY (tear-out copies)

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A COMPILATION OF DATA ON RATES OF ADVANCE IN LAND COMBAT OPERATIONS

INTRODUCTION

1. **BACKGROUND.** A systematic compilation and description of the available statistical data is needed for work on rates of advance. Unfortunately, the available data on rates of advance of land combat forces is widely scattered and often hard to get. This compilation makes most of the data readily available for use by military historians and operations researchers. We are not aware of any other work that covers this area as thoroughly as this Research Paper does. As such, it furnishes a valuable resource for further work in this important field of investigation.

2. **OBJECTIVE.** This paper provides the Army with a useful basic reference, compiling and describing in one place the more important statistical data on rates of advance in land combat operations.

3. **SCOPE.** The intent was to be comprehensive, in the sense of including all of the important statistical data on rates of advance. It is, no doubt, too much to hope that we have found and obtained literally all of the useful data in time to include it. Nevertheless, this compilation should be very helpful to military historians and operations researchers. Counting earlier statistical tabulations that it includes or supersedes, over 30 data bases are encompassed by those given in Appendix A. In addition, some anecdotal information that did not lend itself to statistical tabulation is provided in Appendix B.

4. **ASSUMPTIONS.** The main assumption of this paper is that no work that would substantially alter its principal findings has been overlooked.

5. **APPROACH.**

a. The basic approach used in this study was to obtain, through extensive personal visits, correspondence, and phone calls, all of the important documents containing statistical data on rates of advance. A thorough search of the Defense Technical Information Center (DTIC) holdings was made for works keyed to such terms as advance, movement, Army operations, mobility, maneuver, and so forth. All works whose title, abstract, date of publication, and point of origin indicated relevance to this paper's objective were obtained. In addition, inputs were solicited in PHALANX (the U.S. military operations research newsletter), on the FORUM computer bulletin board system (using both its Army-wide FORUMNET and the special military history HISTORYNET), the Army ORSA bulletin board system, and personal contact with some 50-odd US and foreign government organizations, industrial firms, and educational institutions. These included, among others, such agencies as the Institute for Defense Analyses, the Center for Naval Analyses, The RAND Corporation, the Brookings Institution, the US Army Center of Military History, TRADOC Headquarters, TRAC, US Army Command and General Staff College, US Army War College, Air Force Center for Studies and Analyses, the various National Laboratories, the major operational research establishments of SHAPE, the United Kingdom, Canada, and the Federal Republic of Germany, and the principal US military study and analysis contractors such as SAIC, PRC, SPC, etc., as well as many others. In each case, we asked them not only to furnish or suggest whatever relevant materials they themselves had, but also to direct us to any other points of contact they thought might be fruitful, and all such leads were followed up. Appendix C provides a bibliography of the works collected and consulted.

b. Having secured the relevant documents, we then proceeded to extract and computerize their relevant statistical data, and to describe, critique, and comparatively review them.

6. FINDINGS. The principal findings of the work reported herein are as follows:

a. A lot of statistical data on rates of advance in land combat operations is available.

b. Some past work uses *ad hoc* descriptors and terminology. This makes comparisons difficult.

c. Some past work made mistakes in figuring elapsed times from calendar dates and/or times of day; some even made mistakes in computing rates from distances and elapsed times.

d. Appreciable difficulties for future quantitative work have been created by the use of subjective/qualitative descriptors not meaningfully defined in terms of objectively measurable quantities (e.g., the use of such subjective/qualitative descriptors as "intensity of enemy opposition," "degree of difficulty of the terrain," and the like).

e. Several sources, some intentionally and others unintentionally, tended to select cases of a successful advance by the attacker. This biases the data against successful defensive efforts and in favor of advances by attackers.

f. Reported distances usually are shorter than the actual distances moved, because reported distances tend to be:

- (1) From point to point rather than along the actual paths taken, or
- (2) For displacements of the front line and not of the units involved.

g. Reported times usually are longer than the times actually "in motion," because reported times tend to:

- (1) Include pauses and halts, and to be
- (2) Rounded up to whole days.

h. Because of the tendency for reported distances to be shorter and times longer than actual, rates based on them tend to be lower than actual rates of advance.

7. OTHER OBSERVATIONS.

a. A lot of data on rates of advance is available. Close to 3500 instances of advances in military or quasi-military operations are give in Appendix A, and the anecdotal material in Appendix C includes information on operations from very ancient times to the present. Together they provide a valuable perspective on the evolution of rates of advance over a long period of time. However, some of these data may be correlated (i.e., partly redundant). Use of the data needs to take this possibility into account.

b. Most of the sources use rather brief descriptors to indicate the tactical situation's environmental and operational conditions. There is no one descriptor used by all of the sources. Nor is there one source that uses all of the descriptors. Furthermore, it is hard to tell just what the descriptors actually mean in objectively measurable terms. Nor is it likely that they have been used consistently by all sources. So comparisons based on such descriptors should be made with due caution.

c. The sources concentrate on reporting when advances started and stopped, and what distances were covered. They give very little information on what *caused* the advances to start, stop, speed up, or slow down. So they are not very helpful in addressing such basic questions as:

- (1) What starts a force in motion?
- (2) Once started, what governs its speed and direction?
- (3) What eventually arrests or reverses the force's motion?

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APPENDIX A

COMPILATION OF STATISTICAL DATA ON RATES OF ADVANCE

A-1. PURPOSE AND SCOPE. This appendix provides several data bases (i.e., tabulations of statistical data) on rates of advance in land combat operations. Although they were gleaned from a variety of sources, the intent was to be comprehensive, i.e., to include all noteworthy works of this nature. Surely we cannot hope to have been entirely successful. Nevertheless, counting earlier statistical tabulations that are included in or superseded by them, well over 30 key works are encompassed by the data bases in this appendix. In addition, some anecdotal information that does not lend itself to statistical tabulation is given in Appendix B. This coverage gives us a reasonable expectation that any works as yet unknown or unavailable to us would not substantially alter this paper's principal findings. The chief criterion for inclusion in this appendix is that the work formally list or tabulate quantitative information on the rates of advance experienced in several actual land combat operations. Although this criterion has not been applied overly strictly, it serves to exclude wargaming handbooks and similar works that make assertions about rates of advance without presenting any substantial or specific supporting evidence. We have very particularly in mind assertions accompanied only by vague allusions to their being "based on historical data," when no actual historical data are cited or in evidence. This paper focuses on describing the *data*. A survey and critical review of the *findings* of past work on rates of advance is currently in preparation as "A Survey of Past Work on Rates of Advance in Land Combat Operations," US Army Concepts Analysis Research Paper, CAA-RP-90-03, February 1990. Our own *analysis* of these data is planned.

A-2. MANNER OF PRESENTATION

a. Each description and accompanying statistical tabulation starts on a separate page, and for reference purposes is given a short name (often the author's last name in capitals or the principal commander, e.g., CAESAR). They are presented in alphabetical order of their short names, which are listed below for reference. Each presentation begins with a brief introduction that identifies the data source used, describes any important features of the data or its background, offers for whatever they are worth our own comments and personal views, and explains any special notations or codes used. The statistical tabulations follow immediately after their introductions.

b. An effort has been made to keep the statistical tabulations uniform in format. Thus, some tabulations contain many "NA" entries, indicating that the information was not given by the source. However, the variety of modes of presentation in the original sources made it impractical to adopt an absolutely uniform format. Conflicts in modes of presentation were resolved in favor of fidelity to the information given in the source.

A-3. LIST OF SHORT NAMES FOR THE DATA BASES. The following short names for the data bases are used for ease of reference. Some of these short names may look a bit odd. This is because we shortened them to comply with the MS-DOS limitation of eight characters for file names. No data items were used from the OVERHOLT and RAND data bases; they presented their data only in graphical form, so that specific values are no longer readily recoverable, and it was not feasible in the course of this work to convert it back into digital (tabular or numerical) form. However, they are included for the sake of completeness.

<u>Number</u>	<u>Short Name</u>	<u>No. of Data Items</u>	<u>Page</u>
1	ACSDB	3401	A-5
2	ALEXANDE	124	A-65
3	ANDREWS	55	A-74
4	BAORG	330	A-80
5	CAESAR	27	A-99
6	CDB90	660	A-102
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16	NAPOLEON	31	A-229
17	NORMANDY	50	A-232
18	ORALFORE	360	A-239
19	OVERHOLT	0	A-259
20	PARSONS	33	A-261
21	QUICKWIN	30	A-265
22	RADZIEV	40	A-270
23	RAND	0	A-273
24	RECORD	22	A-275
25	RMC	250	A-278
26	ROWLAND	288	A-295
27	SAVKIN	81	A-313
28	SIEGFRIE	40	A-318
29	WAINSTEI	237	A-323
30	<u>XENOPHON</u>	<u>38</u>	<u>A-337</u>
	TOTAL	7101	

A-4. STANDARDIZATION OF UNITS, NOTATION, AND TREATMENT OF COMPUTATIONAL MISTAKES.

a. Our sources used a variety of units. This makes it very hard to compare values. For example, is an advance of 1,140 yards in two and a half hours (456 yds/hr) faster or slower than one of 21.75 miles in 3.5 days (6.21 mi/day), and by what percentage? For our work, we decided to convert all distances to kilometers and all time intervals to days. Thus, we find for the example given above that the rates are practically the same, the first being 1.04 km in 2.5 hours (10.01 km/day) and the second being 35.00 km in 3.5 days (10.00 km/day). The appropriate conversion factors are (see, for example, Mechtly, E. A., "The International System of Units: Physical Constants and Conversion Factors," NASA SP-7012, Second Revision, Scientific and Technical Information Office, National Aeronautics and Space Administration, Washington, DC. 1973):

<u>Multiply</u>	<u>By</u>	<u>To obtain</u>
miles/day	1.609344	km/day
kiloyard/day	0.9144	km/day
yards/hour	0.9144×24/1000	km/day

b. In our data bases we used "NA" to indicate that the source did not provide this item of information, and "NU" to indicate that both we and the source do not use this item of information. Except in the ANDREWS and the GLANTZ data bases, we did not attempt to introduce our own values for information not actually given by the sources. Thus, the descriptors given in the data bases for such environmental and operational items as terrain, visibility, defensive posture/mission, level or intensity of opposition to the advance, size of unit(s) involved, etc. are in nearly all cases those used by the source. The introduction to each data base provides any description, discussion, or definition of these terms offered by the source of the data. We have not attempted to provide any additional clarification or explanation.

c. We found several errors in computation. Most of them involved computing elapsed times from starting and ending dates or hours of the day. For example, the source may state that a certain advance of 24 kilometers took place on 15-18 June, and give its elapsed time as 3 days and its rate as 8 km/day, without further explanation. But this is a mistake, since there are actually 4 days between 15 and 18 June inclusive (we count the starting and ending days because most operations start early on the first day and continue well into the last), so the rate is actually 6 km/day. Sometimes, even when the elapsed times are correct, the rates given do not agree with the tabulated distances and elapsed times, yet the source says nothing about these discrepancies. For our work, unless the source clearly indicated that such was *not* intended, we recomputed all its elapsed times by treating starting and ending dates as inclusive. Then all rates were recomputed using the new elapsed times with the distances given in the source. In effect, this approach treats the source's distances and dates as appreciably more reliable than its rates.

A-5. SPECIAL ISSUES. The sources rarely address certain important issues of concern to later analysis. For the most part, we can only point them out so that other users will be aware of the issues and alerted to find their own approach to them.

a. How is distance defined? Do all the sources define it consistently?

(1) Initial to final position of some vehicle, or unit?

- (a) Straight-line distance?
- (b) Along axis of main advance?
- (c) Odometer distance?
- (d) Following the actual route of some element?
- (e) Initial to final location?
- (f) Only forward of original FEBA (Forward Edge of the Battlefield) trace?

(2) FEBA trace to FEBA trace?

- (a) Maximum displacement?
- (b) Average displacement?
 - 1. Which sector of the front applies to this average?
 - 2. What time applies to this average?

b. How is time interval defined? Do all the sources define it consistently?

- (1) Start to finish (door to door)?
- (2) Only time spent "in motion"?
- (3) Only time spent moving toward goal?

c. What do such situational descriptors as the following really mean? How could they be defined more precisely and objectively? Do all the sources define them consistently?

- (1) Flat, hilly, rugged, mountainous, level
- (2) Open, medium, close terrain
- (3) Wooded, urban, brushy
- (4) Wet, rainy, snow-covered, muddy, stormy

d. Is there a bias toward the attacker, or are unsuccessful attacks and attacks that wound up losing ground to enemy counterattacks treated on an equal footing with attacks that were either fully successful (in the sense that they seized their intended terrain objectives) or partly successful (in the sense that at least a modest advance was achieved, whether the intended terrain objective was taken or not)? Are the documents surveyed consistent with regard to possible attacker biases?

e. The following explains what we mean by attacker bias. Some sources select cases for examination based on whether or not the attacker actually succeeded in advancing. When the intent is to study unopposed advances this may be entirely acceptable. However, some studies of opposed advances *also* use such selection practices. Perhaps they reasoned that "If we are going to study rates of advance, hadn't we better study cases in which there *was* an advance?" Unfortunately, of course, such reasoning is specious and the resulting selection process merely biases the sample. Ideally, all attempted advances would be included, and we would see how they turned out: large gain of ground, small gain of ground, no net gain or loss, small loss of ground, large loss of ground. This would certainly result in there being no biases whatever. However, this counsel of perfection is seldom attainable, and in practice there are almost sure to be some biases. So the practical issue is to gain at least an "appreciation" for the effects of whatever biases there are, and those effects can range from quite negligible to utterly disastrous. Unfortunately, very few sources even mention these selectivity and bias issues, and none discusses their impact on study findings. Perhaps these issues escaped their notice. When there is a selection bias toward attacks that actually succeeded in advancing and is sizable enough to have a serious impact on its findings, we say that the source suffers from attacker bias.

f. Of course several other types of bias are possible. For example, there could be a defender bias (i.e., a deliberate or unwitting tendency to select actions that had a successful defense), a bias against meeting engagements, and so forth. They are not explored here because so few studies give enough information to judge either their presence or impact. However, this should not be interpreted as suggesting that the studies do not exhibit these biases, or that they are not important.

ACSDB

1. Data Source:

- a. Title: The Ardennes Campaign Simulation Data Base (ACSDB)
- b. Author: Data Memory Systems, Inc.
- c. Date: 18 December 1989
- d. Organization: Data Memory Systems, Inc., 10392 Democracy Lane, Fairfax, VA 22030
- e. Number: Contract No. MDA903-87-C-0787
- f. Available from: US Army Concepts Analysis Agency

2. Data Description:

a. The Ardennes Campaign Simulation Data Base (ACSDB) is a computerized data base of the World War II campaign fought in December 1944 and January 1945, popularly known as the "Battle of the Bulge." It uses the dBASEIVTM data base management system to facilitate storage and manipulation. The data include daily information on unit location, activities, order of battle, personnel, equipment, and logistics at the army, corps, division, and brigade level for the period 16 December 1944 through 16 January 1945, plus data on tactical air operations, tables of organization and equipment (TO/E) of units, and equipment used by opposing forces in the Ardennes Campaign. The computerized portion of the ACSDB is about 39 megabytes in size. It is supplemented by the written reports containing bibliographic, definitional, and other information; a set of full-scale color photographs of 1/100,000 scale maps of the Ardennes region with a clear acetate overlay on which are shown locations of US and German units on 16 December 1944; a user's guide for the ACSDB; a narrative on the single-shot probability of kill (SSPK) data researched for the ACSDB; and a collection of photocopies of all records used for generation of the ACSDB totaling some 10 cubic feet of printed material.

b. (pg IV-1) "The Unit Location Data Base of the Ardennes Campaign Simulation Data Base (ACSDB) is used to record daily information on the activities and locations of US, British, and German ground units at division-level and above."

c. The source obtained its data from both primary and secondary sources.

(1) The primary records used for daily information on frontline locations, boundaries between frontline units, and other unit location data included US Army daily SITREPS (Situation Reports) and British Army War Diaries, and OKW briefing maps (which were prepared three times daily using red and blue color markings to show the locations of German and Allied units on topographical maps of the area).

(2) Other sources included unit histories, official histories, and chronologies. Use was also made of the manuscripts prepared by German division, corps and army commanders as part of the US Army's postwar Foreign Military Studies program.

(3) Daily unit location data was generated using the same general approach for all three nations. First the daily locations of divisions and brigades were determined. This information was then reviewed and their frontline traces compiled to generate the data on corps. The process was repeated using corps data for armies. Finally, the frontline traces and locations of other significant unit elements of all forces were checked by comparing the daily frontline locations of opposing Allied and German units. This step was necessary because the unit location data of opposing forces was

derived separately. The proofing process involved plotting grid coordinates of units using the graphics feature of the Reflex™ data base management software. This check showed remarkably close correlation between the frontline traces of the opposing forces, testimony to the accuracy of the German maps, the Allied situation reports, and the postwar manuscripts of the German officers.

d. The following information is given in the Unit Location Data Base part of the ACSDB (quoted from pp IV-1 to IV-7 of the source).

(1) Unit Name; Field 1. Identification of the unit for which location data is recorded in the record is provided under "Unit Name." The designations used for divisions and Brigades are the same ones used in the Unit and Unit Inventory Data Bases [which are other parts of the ACSDB]. For corps and armies, only the title of the unit is entered (i.e., "5th PzArmy," "XXX Corps," "1st Army," "III Corps," "I SSPzK," etc.), unlike the entries used in the Unit and Unit Inventory Data Bases which differentiate between corps/army headquarters and corps/army troops ("5th PzArmy Troops," "XXX Corps Troops," "1st Army HQ," etc.).

(2) Date; Field 2. Provided under "Date" is the date in month-day-year format of the record. See the ACSDB Time Conventions narrative [not reproduced here] for definitions of time periods for the US, British, and German records in the Unit Location Data Base.

(3) Nationality; Field 3. This is the nationality of the unit for which data is recorded. "A" designates American (US), "B" designates British, and "G" designates German.

(4) Parent Unit; Field 4. Recorded under "Parent Unit" is the identification of the immediate superior unit of the unit tracked in the Unit Location Record. Designations recorded under "Parent Unit" are the same as those used for "Unit Name," i.e., "5th PzArmy," "I SSPzK," "XXX Corps," "1st Army," etc.

(5) HQ Starting Location; Field 5. Recorded under "HQ Starting Location" is the location of the unit's headquarters at the beginning of the day. Its location is designated in all cases by the Universal Transverse Mercator (UTM) four- or six-digit grid coordinates used on the 1943 Geographical Section, General Staff maps produced by the Army Map Service. These maps are:

Sheet #	Name
8	Brussels
9	Liege
12	Namur
13	Marche
16	Mezieres
14	Arlon
R-1	Koeln
S-1	Bonn
T-1	Trier
V-1	Neunkirchen

If information is available, an actual place location name is included, most commonly a town, village, or city name.

(6) Mission; Field 6. This is a text field, i.e., information recorded in this field is in text format. Under "Mission" is recorded a unit's basic mission for the day, including planned activities, operations, changes in organization, and other pertinent information. This is a "required" data field, i.e., information on unit mission is provided in the Unit Location Data Base for each unit for every day.

(7) Displacement; Field 7. Under "Displacement" is recorded:

(a) The straight-line distance in kilometers that the center of a unit's frontline moved during the 24 hours beginning at 0600 hours of the date recorded under "Date," or

(b) The straight-line distance in kilometers that the headquarters of a unit moved during the 24 hours beginning at 0600 hours of the date recorded under "Date," or

(c) The straight-line distance in kilometers that the center of mass of a unit moved during the 24 hours beginning at 0600 hours of the date recorded under "Date," or

(d) Any other straight-line movement distance (in kilometers) moved by a unit from one point to another as specified under "Remarks" [cf. Fields 22, 28 and 29].

The "Displacement" value is always positive. Displacement can indicate movement of a unit while in reserve or transit. Case (a) above is always used to describe unit movement while the unit is in a frontline position. The movement can be forward, lateral, or retrograde movement. Cases (b) to (d) depend on the nature and availability of the information found in data sources. When not self-evident in meaning, data recorded under "Displacement" is always explained under "Remarks" [cf. Fields 22, 28, and 29] to facilitate understanding of a unit's movement.

(8) Distance Opposed Advanced; Field 8. Data recorded under "Distance Opposed Advanced" is the distance in kilometers that a unit moves in combat and is only used to record data when a unit or significant elements of it are in the frontline. "Distance Opposed Advanced" is a subset of location displacement, and its absolute value never exceeds the value of "Displacement." Positive values entered under "Distance Opposed Advanced" represent advances or forward movement, and negative values represent retrograde movement.

(9) Width of Front; Field 9. Entered under "Width of Front" is a unit's frontline width (in kilometers), bounded on its flanks by the grid coordinates provided under "Left Flank" and "Right Flank" (Fields 10 and 11) and following a frontline trace delineated by grid coordinates provided under "REFERENCE POINTS" (Fields 12-15 and 34-37). When a unit is in transit behind or in reserve out of the frontline, a value of 0.0 is provided under "Width of Front." The front and rear of a unit march column may also be provided under "Left Flank" and "Right Flank." When information in sources is available, the route of a march column is identified by grid coordinates recorded under "REFERENCE POINTS." Data in "REFERENCE POINTS" is also used to describe the outline of a unit's "goose egg" position when it is in reserve. In cases where information in sources on a unit's location in reserve was minimal, only one or two "REFERENCE POINTS" may be used to identify the unit's location.

(10) Separate Elements; Fields 30-33. Data entered under "Separate Elements" (using grid coordinates) describes the location of major elements of a unit not in the immediate vicinity of the main body of the unit, such as detached organic elements of the unit, or units in transit to the main body of the unit. When necessary, amplification of data recorded under "Separate Elements" is provided under "Remarks" [cf. Fields 22, 28, and 29].

(11) Total Time in Combat, Total Time Not in Combat, and Ancillary Fields: Fields 16-21. Data entered in Fields 16-21 record the duration and time periods of a unit's participation in combat or its time out of combat. Data is provided in these fields when available in sources.

(12) Major Decisions/Redirections, Other Significant Events, and Remarks; Fields 22, 28, and 29. These are text fields provided for explanation of a unit's activities and any interpretive remarks to clarify data provided in other fields. Information is provided in these fields when it is available or pertinent to the understanding of data entered in any other field. In practice, due to limitations of text space in the computer data format, the use of the fields is interchangeable, i.e., they are all employed to record any textual information on a unit's activities, location, mission, displacement, etc.

(13) Unit Commander Data; Field 23. This is a text field. Entered under "Unit Commander Data" are the name and rank of the commander of a unit. When a change in command occurs, it is also recorded under "Unit Commander Data." German commanders' rank titles are used for commanders of German units.

(14) Fortifications; Field 24. This is a text field. Recorded under "Fortifications" is information on permanent and field fortifications maintained and occupied by a unit or other units of the same nationality, which are located in the vicinity of the unit. Information is provided in this field when available in sources.

(15) Obstacles; Field 25. This is a text field. Recorded under "Obstacles" is information on permanent and field fortifications of a unit's opponents, or natural obstructions such as woods, rivers, and steep terrain in the vicinity of the unit. Information is provided in this field when available in sources.

(16) Surface Trafficability; Field 26. This is a text field. Recorded under "Surface Trafficability" is information describing the condition of the ground and roads in the vicinity of the unit. Information is provided in this field when available in sources.

(17) Weather; Field 27. This is a text field. Recorded under "Weather" is information on climatic conditions for the 24-hour period on the indicated date and in the vicinity of the unit. Information is frequently taken verbatim from sources and is thus recorded in the format or style of the source.

(18) Sources; (no field number). Each unit has a unique corresponding Reference Data Base record which lists all sources used to compile unit location data for that unit. The Reference Data Base record is identified by a unique alphanumeric code, which is also entered under "Sources" in the Unit Location Data Base records of the corresponding unit. Attachment 1 [not reproduced here] contains a list with the names of units and the alphanumeric codes of their corresponding Reference Data Base records. These are the same codes entered under "Sources" in the Unit Location Data Base records. Note that the specific sources used for each item of information are not provided in the relevant Reference Data Base records. Instead, sources and the page numbers consulted in them are listed as the reference material for "All" data. This format proved necessary because of the impracticability of referencing every piece of data in the Unit Location Data Base, a task which would have resulted in the creation of an excessively large series of reference records for the Unit Location Data Base.

e. (pg X-2) "All location data (headquarters location, frontline trace, location of other significant elements) is as of 0600 hours of the indicated date. All 'dynamic' location data (displacement, distance opposed advanced, activities, and operations) occurs in the 24 hours between 0600 hours of the indicated date and 0559 hours of the immediately subsequent date."

3. Discussion and Comments:

a. This is a major effort to produce a comprehensive quantitative record of the events that occurred during the Ardennes Campaign. The data are in a form that lends itself to ready retrieval and collation.

b. Since the data were entered by several individuals at many different times, it was not possible to stick exactly to the stated data base format. A few slips were found while extracting the following sample of items from the Unit Location data base file.

c. Also, missing values are variously coded as "99999999," "999.9," or as a blank field with no entries. This must be taken into account when using computer programs to process the data.

d. Fields 6 (Mission), 22 (Major Decisions), 24 (Fortifications), 25 (Obstacles), 26 (Surface Trafficability), 27 (Weather), 28 (Other Significant Events), and 29 (Remarks) are not coded in any standard form. Hence, for example, the *same* weather conditions may be variously described as "fog," "foggy," "limited visibility," "visibility limited to 100-200 meters," "moderately foggy," "fog obscured enemy positions," "visibility of enemy positions limited," "visibility hampered operations," etc. Computer processing of the information in these fields is inconvenient (to say the least) in their present format. With enough additional work, it might be possible to convert the information to a standard format.

e. There is no direct record in the data base as to which of the distances mentioned in paragraph 2e(7) was actually entered into Fields 7 (Displacement) and 8 (Distance Opposed Advance). To some extent that information can be inferred from the context, but not in a way that is conveniently programmed for computer manipulation of the information.

4. Data Table Notes:

a. The Unit Location file is much too large to be reproduced here. However, an extract of the Unit Location file is given in the accompanying tables. The full ACSDB is available at CAA.

b. As noted in paragraphs 3c and 3d above, some of the data fields are not in a form that lends itself easily to processing by computer programs. The fields that do lend themselves to computer processing are given here.

c. Even so, the data base is so large we had to break it into sections. We used the following time intervals to divide the data into seven sections:

Section	Time Interval
1	15-19 Dec 44
2	20-24 Dec 44
3	25-29 Dec 44
4	30 Dec 44-3 Jan 45
5	04-08 Jan 45
6	09-13 Jan 45
7	14-16 Jan 45

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1	102d ID	15-Dec-44	A	0.00	0.00	5.80	0.00	24.00
2	104th ID	15-Dec-44	A	0.00	0.00	4.20	0.00	24.00
3	106th ID	15-Dec-44	A	0.00	0.00	32.60	0.00	24.00
4	10th AD	15-Dec-44	A	0.00	0.00	0.00	0.00	24.00
5	1st Army	15-Dec-44	A	3.90	3.90	183.00	999.90	999.00
6	1st ID	15-Dec-44	A	0.00	0.00	21.20	0.00	24.00
7	28th ID	15-Dec-44	A	0.00	0.00	36.70	0.00	24.00
8	29th ID	15-Dec-44	A	0.00	0.00	8.00	0.00	24.00
9	2d AD	15-Dec-44	A	0.00	0.00	3.90	0.00	24.00
10	2d ID	15-Dec-44	A	1.80	1.80	4.20	999.90	999.90
11	30th ID	15-Dec-44	A	0.00	0.00	0.00	0.00	24.00
12	3d AD	15-Dec-44	A	0.00	0.00	0.00	0.00	24.00
13	3d Army	15-Dec-44	A	0.80	0.80	999.90	999.90	999.00
14	3d Cav Gp	15-Dec-44	A	0.00	0.00	18.00	0.00	24.00
15	4th ID	15-Dec-44	A	0.00	0.00	53.70	0.00	24.00
16	5th AD	15-Dec-44	A	999.90	0.00	999.90	999.90	999.90
17	78th ID	15-Dec-44	A	2.50	2.50	14.10	999.90	999.90
18	7th AD	15-Dec-44	A	0.00	0.00	0.00	0.00	24.00
19	83d ID	15-Dec-44	A	0.40	0.40	8.00	999.90	999.90
20	84th ID	15-Dec-44	A	0.00	0.00	7.50	0.00	24.00
21	8th ID	15-Dec-44	A	0.00	0.00	12.60	999.90	999.90
22	90th ID	15-Dec-44	A	0.80	0.80	26.00	999.90	999.90
23	99th ID	15-Dec-44	A	0.00	0.00	29.30	999.90	999.90
24	9th AD	15-Dec-44	A	0.00	0.00	5.40	0.00	24.00
25	9th Army	15-Dec-44	A	0.00	0.00	24.30	0.00	24.00
26	9th ID	15-Dec-44	A	0.00	0.00	3.90	0.00	24.00
27	V Corps	15-Dec-44	A	3.90	3.90	40.90	999.90	999.90
28	VII Corps	15-Dec-44	A	0.50	0.50	19.60	999.90	999.90
29	VIII Corps	15-Dec-44	A	4.00	0.00	112.90	0.00	24.00
30	XIII Corps	15-Dec-44	A	0.00	0.00	12.90	0.00	24.00
31	XIX Corps	15-Dec-44	A	0.00	0.00	11.80	0.00	24.00
32	XX Corps	15-Dec-44	A	0.80	0.80	999.90	999.90	999.90
33	102d ID	16-Dec-44	A	0.00	0.00	5.80	0.00	24.00
34	104th ID	16-Dec-44	A	0.00	0.00	4.20	999.90	999.90
35	106th ID	16-Dec-44	A	3.50	-3.50	32.60	999.90	999.90
36	10th AD	16-Dec-44	A	0.00	0.00	999.90	0.00	24.00
37	1st Army	16-Dec-44	A	10.80	-10.80	179.00	999.90	999.90
38	1st ID	16-Dec-44	A	26.00	0.00	21.20	0.00	24.00
39	28th ID	16-Dec-44	A	5.20	-5.20	36.70	999.90	999.90
40	29th Arm Bde	16-Dec-44	B	0.00	0.00	0.00	0.00	24.00
41	29th ID	16-Dec-44	A	0.00	0.00	8.00	0.00	24.00
42	2d AD	16-Dec-44	A	0.00	0.00	3.90	0.00	24.00
43	2d ID	16-Dec-44	A	0.00	0.00	4.70	999.90	999.90
44	30th ID	16-Dec-44	A	0.00	0.00	0.00	0.00	24.00
45	3d AD	16-Dec-44	A	0.00	0.00	0.00	0.00	24.00
46	3d Army	16-Dec-44	A	999.90	0.00	999.90	999.90	999.90
47	3d Cav Gp	16-Dec-44	A	0.00	0.00	18.00	0.00	24.00
48	4th ID	16-Dec-44	A	6.30	-6.30	53.70	999.90	999.90
49	53d ID	16-Dec-44	B	26.00	0.00	0.00	0.00	24.00
50	5th AD	16-Dec-44	A	0.80	0.80	7.10	999.90	999.90
51	78th ID	16-Dec-44	A	0.70	-0.70	18.30	999.90	999.90
52	7th AD	16-Dec-44	A	68.50	0.00	0.00	0.00	24.00
53	83d ID	16-Dec-44	A	1.00	1.00	8.10	999.90	999.90
54	84th ID	16-Dec-44	A	0.00	0.00	7.50	999.90	999.90
55	8th ID	16-Dec-44	A	0.00	0.00	12.60	0.00	24.00
56	90th ID	16-Dec-44	A	0.00	0.00	22.70	0.00	24.00
57	99th ID	16-Dec-44	A	4.00	-4.00	29.30	999.90	999.90
58	9th AD	16-Dec-44	A	1.50	-1.50	5.40	999.90	999.90
59	9th Army	16-Dec-44	A	0.00	0.00	24.30	999.90	999.90
60	9th ID	16-Dec-44	A	0.00	0.00	3.90	999.90	999.90
61	V Corps	16-Dec-44	A	5.50	-5.50	51.30	999.90	999.90
62	VII Corps	16-Dec-44	A	0.30	-0.30	19.60	999.90	999.90
63	VIII Corps	16-Dec-44	A	10.80	-10.80	112.90	999.90	999.90
64	XIII Corps	16-Dec-44	A	0.00	0.00	12.90	999.90	999.90
65	XIX Corps	16-Dec-44	A	0.00	0.00	11.80	0.00	24.00

ACSOB (SECTION 15-19 DEC 44)

PART 2 OF 6

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
66	XX Corps	16-Dec-44	A	999.90	0.00	999.90	0.00	0.00
67	10th SSPzD	16-Dec-44	G	28.00	0.00	0.00	0.00	24.00
68	116th PzD	16-Dec-44	G	2.00	2.00	7.00	999.90	999.90
69	12th SSPzD	16-Dec-44	G	13.50	2.00	0.00	0.00	24.00
70	12th VGD	16-Dec-44	G	5.00	5.00	8.00	999.90	999.90
71	150th PzBde	16-Dec-44	G	35.00	0.00	0.00	0.00	24.00
72	15th Army	16-Dec-44	G	0.00	0.00	84.40	0.00	24.00
73	15th PzGD	16-Dec-44	G	0.00	0.00	0.00	0.00	24.00
74	167th VGD	16-Dec-44	G	0.00	0.00	0.00	0.00	24.00
75	18th VGD	16-Dec-44	G	5.00	5.00	16.00	999.90	999.90
76	1st SSPzD	16-Dec-44	G	10.50	10.50	0.00	999.90	999.90
77	212th VGD	16-Dec-44	G	3.00	3.00	17.00	999.90	999.90
78	246th VGD	16-Dec-44	G	0.00	0.00	7.00	999.90	999.90
79	26th VGD	16-Dec-44	G	7.00	7.00	8.00	999.90	999.90
80	272d VGD	16-Dec-44	G	0.00	0.00	11.00	999.90	999.90
81	276th VGD	16-Dec-44	G	2.00	2.00	10.50	999.90	999.90
82	277th VGD	16-Dec-44	G	1.00	1.00	9.00	999.90	999.90
83	2d PzD	16-Dec-44	G	5.50	5.50	4.50	999.90	999.90
84	2d SSPzD	16-Dec-44	G	0.00	0.00	0.00	0.00	24.00
85	326th VGD	16-Dec-44	G	0.00	0.00	9.00	999.90	999.90
86	340th VGD	16-Dec-44	G	0.00	0.00	7.00	999.90	999.90
87	344th ID	16-Dec-44	G	0.00	0.00	0.00	0.00	24.00
88	352d VGD	16-Dec-44	G	3.50	3.50	6.00	999.90	999.90
89	353d ID	16-Dec-44	G	0.00	0.00	6.00	999.90	999.90
90	363d VGD	16-Dec-44	G	0.00	0.00	9.00	0.00	24.00
91	3d FJD	16-Dec-44	G	7.50	7.50	4.00	999.90	999.90
92	3d PzGD	16-Dec-44	G	22.00	0.00	0.00	0.00	24.00
93	47th VGD	16-Dec-44	G	0.00	0.00	9.50	0.00	24.00
94	560th VGD	16-Dec-44	G	3.50	3.50	6.00	999.90	999.90
95	5th FJD	16-Dec-44	G	6.00	6.00	7.00	999.90	999.90
96	5th PzArmy	16-Dec-44	G	8.00	8.00	49.70	999.90	999.90
97	62d VGD	16-Dec-44	G	1.50	1.50	8.00	999.90	999.90
98	6th PzArmy	16-Dec-44	G	7.50	7.50	40.60	999.90	999.90
99	7th Army	16-Dec-44	G	6.00	6.00	51.70	999.90	999.90
100	85th ID	16-Dec-44	G	0.00	0.00	6.00	0.00	24.00
101	89th ID	16-Dec-44	G	0.00	0.00	16.00	0.00	24.00
102	9th PzD	16-Dec-44	G	0.00	0.00	0.00	0.00	24.00
103	9th SSPzD	16-Dec-44	G	19.00	0.00	0.00	0.00	24.00
104	FBB	16-Dec-44	G	0.00	0.00	0.00	0.00	24.00
105	FGB	16-Dec-44	G	0.00	0.00	0.00	0.00	24.00
106	I SSPzK	16-Dec-44	G	7.50	7.50	20.50	999.90	999.90
107	II SSPzK	16-Dec-44	G	19.00	0.00	0.00	0.00	24.00
108	LIII K	16-Dec-44	G	0.00	0.00	14.80	0.00	24.00
109	LVIII PzK	16-Dec-44	G	3.50	3.50	15.30	999.90	999.90
110	LXVI K	16-Dec-44	G	5.00	5.00	25.00	999.90	999.90
111	LXVII K	16-Dec-44	G	0.00	0.00	21.00	0.00	0.00
112	LXXIV K	16-Dec-44	G	0.00	0.00	28.00	0.00	24.00
113	LXXX K	16-Dec-44	G	3.00	3.00	27.00	999.90	999.90
114	LXXXI K	16-Dec-44	G	0.00	0.00	26.50	0.00	24.00
115	LXXXV K	16-Dec-44	G	6.00	6.00	12.90	999.90	999.90
116	PzLehrD	16-Dec-44	G	17.00	0.00	0.00	999.90	999.90
117	XII SSK	16-Dec-44	G	0.00	0.00	7.00	0.00	24.00
118	XLVII PzK	16-Dec-44	G	7.00	7.00	12.00	999.90	999.90
119	102d ID	17-Dec-44	A	0.00	0.00	5.80	0.00	24.00
120	104th ID	17-Dec-44	A	0.00	0.00	4.20	0.00	24.00
121	106th ID	17-Dec-44	A	999.90	-4.00	11.50	999.90	999.90
122	10th AD	17-Dec-44	A	999.90	0.00	0.00	0.00	24.00
123	1st Army	17-Dec-44	A	12.70	-12.70	182.70	999.90	999.90
124	1st ID	17-Dec-44	A	0.00	0.00	21.20	0.00	24.00
125	28th ID	17-Dec-44	A	2.90	-2.90	32.30	999.90	999.90
126	29th Arm Bde	17-Dec-44	B	0.00	0.00	0.00	0.00	24.00
127	29th ID	17-Dec-44	A	0.00	0.00	8.00	0.00	24.00
128	2d AD	17-Dec-44	A	0.00	0.00	3.90	0.00	24.00
129	2d ID	17-Dec-44	A	7.80	0.00	4.70	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
130	30th ID	17-Dec-44	A	8.50	0.00	0.00	0.00	24.00
131	3d AD	17-Dec-44	A	0.00	0.00	0.00	0.00	24.00
132	3d Army	17-Dec-44	A	0.00	0.00	999.90	999.90	24.00
133	3d Cav Gp	17-Dec-44	A	0.00	0.00	18.00	0.00	24.00
134	4th ID	17-Dec-44	A	0.40	-0.40	44.90	999.90	999.90
135	53d ID	17-Dec-44	B	999.90	0.00	0.00	0.00	24.00
136	5th AD	17-Dec-44	A	0.00	0.00	5.70	0.00	24.00
137	78th ID	17-Dec-44	A	0.00	0.00	16.10	999.90	999.90
138	7th AD	17-Dec-44	A	0.00	0.00	0.00	999.90	999.90
139	83d ID	17-Dec-44	A	1.70	1.70	8.50	999.90	999.90
140	84th ID	17-Dec-44	A	0.00	0.00	7.50	0.00	24.00
141	8th ID	17-Dec-44	A	0.00	0.00	12.60	0.00	24.00
142	90th ID	17-Dec-44	A	0.00	0.00	22.70	0.00	24.00
143	99th ID	17-Dec-44	A	5.40	-5.40	36.00	999.90	999.90
144	9th AD	17-Dec-44	A	5.00	-5.00	13.30	999.90	999.90
145	9th Army	17-Dec-44	A	0.00	0.00	24.30	0.00	24.00
146	9th ID	17-Dec-44	A	0.00	0.00	3.90	0.00	24.00
147	V Corps	17-Dec-44	A	4.80	-4.80	45.60	999.90	999.90
148	VII Corps	17-Dec-44	A	1.70	1.70	21.00	999.00	999.90
149	VIII Corps	17-Dec-44	A	12.70	-12.70	114.70	999.90	999.90
150	XIII Corps	17-Dec-44	A	0.00	0.00	12.90	0.00	24.00
151	XIX Corps	17-Dec-44	A	0.00	0.00	11.80	0.00	24.00
152	XX Corps	17-Dec-44	A	0.00	0.00	999.90	0.00	24.00
153	10th SSPzD	17-Dec-44	G	0.00	0.00	0.00	0.00	24.00
154	116th PzD	17-Dec-44	G	15.00	15.00	0.00	999.90	999.90
155	12th SSPzD	17-Dec-44	G	2.50	2.50	2.00	999.90	999.90
156	12th VGD	17-Dec-44	G	6.00	6.00	3.00	999.90	999.90
157	150th PzBde	17-Dec-44	G	0.00	0.00	0.00	0.00	24.00
158	15th Army	17-Dec-44	G	0.00	0.00	67.90	0.00	24.00
159	15th PzGD	17-Dec-44	G	0.00	0.00	0.00	0.00	24.00
160	167th VGD	17-Dec-44	G	0.00	0.00	0.00	0.00	24.00
161	18th VGD	17-Dec-44	G	11.00	3.00	21.00	999.90	999.90
162	1st SSPzD	17-Dec-44	G	25.00	25.00	10.00	999.90	999.90
163	212th VGD	17-Dec-44	G	6.00	6.00	10.50	999.90	999.90
164	246th VGD	17-Dec-44	G	16.00	0.00	7.00	999.90	999.90
165	26th VGD	17-Dec-44	G	4.50	4.50	7.50	999.90	999.90
166	272d VGD	17-Dec-44	G	1.00	-1.00	11.00	999.90	999.90
167	276th VGD	17-Dec-44	G	4.00	4.00	2.00	999.90	999.90
168	277th VGD	17-Dec-44	G	4.00	4.00	8.50	999.90	999.90
169	2d PzD	17-Dec-44	G	1.50	1.50	3.00	999.90	999.90
170	2d SSPzD	17-Dec-44	G	13.00	0.00	0.00	0.00	24.00
171	326th VGD	17-Dec-44	G	0.00	0.00	9.00	999.90	999.90
172	340th VGD	17-Dec-44	G	0.00	0.00	7.00	999.90	999.90
173	344th ID	17-Dec-44	G	0.00	0.00	0.00	0.00	24.00
174	352d VGD	17-Dec-44	G	2.50	2.50	5.00	999.90	999.90
175	353d ID	17-Dec-44	G	0.00	0.00	6.00	999.90	999.90
176	363d VGD	17-Dec-44	G	0.00	0.00	9.00	0.00	24.00
177	3d FJD	17-Dec-44	G	5.00	5.00	6.00	999.90	999.90
178	3d PzGD	17-Dec-44	G	8.00	0.00	0.00	0.00	24.00
179	47th VGD	17-Dec-44	G	0.00	0.00	9.50	0.00	24.00
180	560th VGD	17-Dec-44	G	3.00	3.00	9.00	999.90	999.90
181	5th FJD	17-Dec-44	G	5.50	5.50	4.50	999.90	999.90
182	5th PzArmy	17-Dec-44	G	10.80	10.80	60.70	999.90	999.90
183	62d VGD	17-Dec-44	G	2.50	2.50	8.50	999.90	999.90
184	6th PzArmy	17-Dec-44	G	6.00	6.00	41.20	999.90	999.90
185	7th Army	17-Dec-44	G	6.00	6.00	54.80	999.90	999.90
186	85th ID	17-Dec-44	G	0.00	0.00	6.00	0.00	24.00
187	89th ID	17-Dec-44	G	0.00	0.00	13.00	0.00	24.00
188	9th PzD	17-Dec-44	G	0.00	0.00	0.00	0.00	24.00
189	9th SSPzD	17-Dec-44	G	13.50	0.00	0.00	0.00	24.00
190	F88	17-Dec-44	G	0.00	0.00	0.00	0.00	24.00
191	FGB	17-Dec-44	G	0.00	0.00	0.00	0.00	24.00
192	I SSPzK	17-Dec-44	G	25.00	6.00	24.90	999.90	999.90
193	II SSPzK	17-Dec-44	G	13.50	0.00	0.00	0.00	24.00

ACSDB (SECTION 15-19 DEC 44)

PART 4 OF 5

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
194	LIII K	17-Dec-44	G	0.00	0.00	14.80	0.00	24.00
195	LVIII PzK	17-Dec-44	G	15.00	15.00	16.60	999.90	999.90
196	LXVI K	17-Dec-44	G	11.00	3.00	29.00	999.90	999.90
197	LXVII K	17-Dec-44	G	1.00	-1.00	21.00	8.00	16.00
198	LXXIV K	17-Dec-44	G	0.00	0.00	28.00	0.00	24.00
199	LXXX K	17-Dec-44	G	6.00	6.00	17.70	999.90	999.90
200	LXXXI K	17-Dec-44	G	0.00	0.00	26.50	0.00	24.00
201	LXXXV K	17-Dec-44	G	5.50	5.50	15.50	999.90	999.90
202	PzLehrD	17-Dec-44	G	8.00	8.00	7.00	999.90	999.90
203	XII SSK	17-Dec-44	G	0.00	0.00	7.00	0.00	24.00
204	XLVII PzK	17-Dec-44	G	8.00	8.00	16.20	999.90	999.90
205	102d ID	18-Dec-44	A	0.00	0.00	5.80	0.00	24.00
206	104th ID	18-Dec-44	A	0.00	0.00	4.20	999.90	999.90
207	106th ID	18-Dec-44	A	14.80	0.00	11.50	999.90	999.90
208	10th AD	18-Dec-44	A	999.90	0.00	999.90	999.90	999.90
209	1st Army	18-Dec-44	A	10.50	-10.50	160.60	999.90	999.90
210	1st ID	18-Dec-44	A	0.00	0.00	2.70	0.00	24.00
211	28th ID	18-Dec-44	A	9.90	-9.90	29.10	999.90	999.90
212	29th Arm Bde	18-Dec-44	B	0.00	0.00	0.00	0.00	24.00
213	29th ID	18-Dec-44	A	0.00	0.00	8.00	0.00	24.00
214	2d AD	18-Dec-44	A	0.00	0.00	3.90	0.00	24.00
215	2d ID	18-Dec-44	A	0.00	0.00	5.40	999.90	999.90
216	30th ID	18-Dec-44	A	0.00	0.00	0.00	999.90	999.90
217	3d AD	18-Dec-44	A	0.00	0.00	0.00	0.00	24.00
218	3d Army	18-Dec-44	A	1.50	1.50	999.90	999.90	999.90
219	3d Cav Gp	18-Dec-44	A	0.00	0.00	18.00	0.00	24.00
220	4th ID	18-Dec-44	A	1.80	1.80	45.00	999.90	999.90
221	53d ID	18-Dec-44	B	0.00	0.00	0.00	0.00	24.00
222	5th AD	18-Dec-44	A	999.90	0.00	5.70	999.90	999.90
223	78th ID	18-Dec-44	A	999.90	0.00	16.10	0.00	24.00
224	7th AD	18-Dec-44	A	2.70	-2.70	21.30	999.90	999.90
225	83d ID	18-Dec-44	A	0.60	0.60	6.30	999.90	999.90
226	84th ID	18-Dec-44	A	1.80	1.80	7.50	12.20	11.80
227	8th ID	18-Dec-44	A	0.00	0.00	12.60	0.00	24.00
228	90th ID	18-Dec-44	A	1.50	1.50	22.70	999.90	999.90
229	99th ID	18-Dec-44	A	7.20	-7.20	28.70	999.90	999.90
230	9th AD	18-Dec-44	A	0.00	0.00	7.70	999.90	999.90
231	9th Army	18-Dec-44	A	1.80	1.80	24.30	999.90	999.90
232	9th ID	18-Dec-44	A	1.60	1.60	3.90	999.90	999.90
233	V Corps	18-Dec-44	A	5.10	-5.10	59.40	999.90	999.90
234	VII Corps	18-Dec-44	A	5.50	5.50	32.10	999.90	999.90
235	VIII Corps	18-Dec-44	A	10.50	-10.50	123.50	999.90	999.90
236	XIII Corps	18-Dec-44	A	1.80	1.80	12.90	999.90	999.90
237	XIX Corps	18-Dec-44	A	0.00	0.00	11.80	0.00	24.00
238	XX Corps	18-Dec-44	A	1.50	1.50	999.90	999.90	999.90
239	10th SSPzD	18-Dec-44	G	0.00	0.00	0.00	0.00	24.00
240	118th PzD	18-Dec-44	G	20.00	9.00	0.00	999.90	999.90
241	12th SSPzD	18-Dec-44	G	3.50	0.00	2.00	999.90	999.90
242	12th VGD	18-Dec-44	G	1.50	1.50	5.00	999.90	999.90
243	150th PzBde	18-Dec-44	G	0.00	0.00	0.00	0.00	24.00
244	15th Army	18-Dec-44	G	0.00	0.00	56.20	0.00	24.00
245	15th PzGD	18-Dec-44	G	78.00	0.00	0.00	0.00	24.00
246	167th VGD	18-Dec-44	G	0.00	0.00	0.00	0.00	24.00
247	18th VGD	18-Dec-44	G	2.00	2.00	32.00	999.90	999.90
248	1st SSPzD	18-Dec-44	G	8.00	8.00	10.50	999.90	999.90
249	212th VGD	18-Dec-44	G	0.00	0.00	11.00	999.90	999.90
250	246th VGD	18-Dec-44	G	21.00	0.00	0.00	0.00	24.00
251	26th VGD	18-Dec-44	G	10.50	10.50	7.00	999.90	999.90
252	272d VGD	18-Dec-44	G	0.00	0.00	12.50	999.90	999.90
253	276th VGD	18-Dec-44	G	1.00	1.00	5.50	999.90	999.90
254	277th VGD	18-Dec-44	G	1.50	1.50	5.50	999.90	999.90
255	2d PzD	18-Dec-44	G	15.00	9.00	3.50	999.90	999.90
256	2d SSPzD	18-Dec-44	G	0.00	0.00	0.00	0.00	24.00
257	328th VGD	18-Dec-44	G	0.00	0.00	9.00	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
258	340th VGD	18-Dec-44	G	0.00	0.00	7.00	999.90	999.90
259	344th ID	18-Dec-44	G	0.00	0.00	0.00	0.00	24.00
260	352d VGD	18-Dec-44	G	2.50	-2.50	7.50	999.90	999.90
261	353d ID	18-Dec-44	G	0.00	0.00	6.00	999.90	999.90
262	363d VGD	18-Dec-44	G	0.00	0.00	17.00	0.00	24.00
263	3d FJD	18-Dec-44	G	0.00	0.00	4.50	999.90	999.90
264	3d PzGD	18-Dec-44	G	0.00	0.00	0.00	0.00	24.00
265	47th VGD	18-Dec-44	G	0.00	0.00	9.50	0.00	24.00
266	560th VGD	18-Dec-44	G	9.50	2.50	2.00	999.90	999.90
267	5th FJD	18-Dec-44	G	4.50	4.50	6.00	999.90	999.90
268	5th PzArmy	18-Dec-44	G	14.90	14.90	53.60	999.90	999.90
269	62d VGD	18-Dec-44	G	1.00	1.00	11.60	999.90	999.90
270	6th PzArmy	18-Dec-44	G	8.00	8.00	36.70	999.90	999.90
271	7th Army	18-Dec-44	G	4.50	4.50	56.10	999.90	999.90
272	85th ID	18-Dec-44	G	0.00	0.00	6.00	0.00	24.00
273	89th ID	18-Dec-44	G	0.00	0.00	16.00	0.00	24.00
274	9th PzD	18-Dec-44	G	84.00	0.00	0.00	0.00	24.00
275	9th SSPzD	18-Dec-44	G	17.00	0.00	0.00	0.00	24.00
276	FBB	18-Dec-44	G	28.00	0.00	0.00	0.00	24.00
277	FGB	18-Dec-44	G	0.00	0.00	0.00	0.00	24.00
278	I SSPzK	18-Dec-44	G	8.00	8.00	12.50	999.90	999.90
279	II SSPzK	18-Dec-44	G	17.00	0.00	0.00	0.00	24.00
280	Korps Felber	18-Dec-44	G	0.00	0.00	7.00	0.00	24.00
281	LIII K	18-Dec-44	G	0.00	0.00	14.80	0.00	24.00
282	LVIII PzK	18-Dec-44	G	9.00	9.00	33.30	999.90	999.90
283	LXVI K	18-Dec-44	G	2.00	2.00	44.60	999.90	999.90
284	LXVII K	18-Dec-44	G	3.50	3.50	33.00	999.90	999.90
285	LXXIV K	18-Dec-44	G	0.00	0.00	28.00	0.00	24.00
286	LXXX K	18-Dec-44	G	3.00	3.00	19.00	999.90	999.90
287	LXXXI K	18-Dec-44	G	0.00	0.00	26.50	0.00	24.00
288	LXXXV K	18-Dec-44	G	4.50	4.50	17.90	999.90	999.90
289	PzLehrD	18-Dec-44	G	18.00	18.00	10.50	999.90	999.90
290	XII SSK	18-Dec-44	G	0.00	0.00	0.00	0.00	24.00
291	XLVII PzK	18-Dec-44	G	18.00	18.00	15.50	999.90	999.90
292	101st AbnD	19-Dec-44	A	7.60	-7.60	16.20	999.90	999.90
293	102d ID	19-Dec-44	A	0.00	0.00	6.30	0.00	24.00
294	104th ID	19-Dec-44	A	0.00	0.00	6.40	0.00	24.00
295	106th ID	19-Dec-44	A	999.90	-3.80	15.10	999.90	999.90
296	10th AD	19-Dec-44	A	7.50	7.50	25.80	999.90	999.90
297	1st Army	19-Dec-44	A	3.70	-3.70	236.40	999.90	999.90
298	1st ID	19-Dec-44	A	0.00	0.00	2.70	999.90	999.90
299	28th ID	19-Dec-44	A	11.10	-11.10	22.00	999.90	999.90
300	29th Arm 8de	19-Dec-44	B	0.00	0.00	0.00	0.00	24.00
301	29th ID	19-Dec-44	A	0.00	0.00	8.00	0.00	24.00
302	2d AD	19-Dec-44	A	0.00	0.00	3.90	0.00	24.00
303	2d ID	19-Dec-44	A	2.60	-2.60	5.40	999.90	999.90
304	30th ID	19-Dec-44	A	2.10	-2.10	24.70	999.90	999.90
305	3d AD	19-Dec-44	A	78.40	0.00	0.00	0.00	24.00
306	3d Army	19-Dec-44	A	4.00	0.00	999.90	999.90	999.90
307	3d Cav Gp	19-Dec-44	A	0.00	0.00	18.00	0.00	24.00
308	43d ID	19-Dec-44	B	17.70	0.00	0.00	0.00	24.00
309	4th ID	19-Dec-44	A	0.40	0.40	45.30	999.90	999.90
310	53d ID	19-Dec-44	B	0.00	0.00	0.00	0.00	24.00
311	5th AD	19-Dec-44	A	0.00	0.00	5.70	0.00	24.00
312	78th ID	19-Dec-44	A	2.60	0.00	16.10	0.00	24.00
313	7th AD	19-Dec-44	A	0.00	0.00	18.60	999.90	999.90
314	82d AbnD	19-Dec-44	A	9.50	0.00	0.00	0.00	24.00
315	83d ID	19-Dec-44	A	0.00	0.00	5.30	0.00	24.00
316	84th ID	19-Dec-44	A	0.00	0.00	9.00	0.00	24.00
317	8th ID	19-Dec-44	A	0.00	0.00	19.10	0.00	24.00
318	90th ID	19-Dec-44	A	2.00	0.00	22.50	0.00	24.00
319	99th ID	19-Dec-44	A	8.60	0.00	6.00	999.90	999.90
320	9th AD	19-Dec-44	A	0.00	0.00	11.20	999.90	999.90
321	9th Army	19-Dec-44	A	0.00	0.00	28.60	999.90	24.00

ACSDB (SECTION 15-19 DEC 44)

PART 6 OF 6

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
322	9th ID	19-Dec-44	A	35.20	0.00	5.60	0.00	24.00
323	Guards AD	19-Dec-44	B	0.00	0.00	0.00	0.00	0.00
324	V Corps	19-Dec-44	A	3.70	-3.70	68.60	999.90	999.90
325	VII Corps	19-Dec-44	A	0.00	0.00	44.50	0.00	24.00
326	VIII Corps	19-Dec-44	A	2.50	-2.50	120.60	999.90	999.90
327	XIII Corps	19-Dec-44	A	0.00	0.00	17.00	0.00	24.00
328	XIX Corps	19-Dec-44	A	0.00	0.00	11.80	0.00	24.00
329	XVIII Corps	19-Dec-44	A	999.90	0.00	999.90	999.90	999.90
330	XX Corps	19-Dec-44	A	4.00	0.00	999.90	999.90	999.90
331	XXX Corps	19-Dec-44	B	35.00	0.00	0.00	0.00	0.00
332	10th SSPzD	19-Dec-44	G	0.00	0.00	0.00	0.00	24.00
333	116th PzD	19-Dec-44	G	0.00	17.00	9.00	999.90	999.90
334	12th SSPzD	19-Dec-44	G	0.00	0.00	1.50	999.90	999.90
335	12th VGD	19-Dec-44	G	0.00	0.00	2.00	0.00	24.00
336	150th PzBde	19-Dec-44	G	22.00	0.00	0.00	0.00	24.00
337	15th Army	19-Dec-44	G	0.00	0.00	66.00	0.00	24.00
338	15th PzGD	19-Dec-44	G	0.00	0.00	0.00	0.00	24.00
339	167th VGD	19-Dec-44	G	0.00	0.00	0.00	0.00	24.00
340	18th VGD	19-Dec-44	G	0.00	0.00	41.00	999.90	999.90
341	1st SSPzD	19-Dec-44	G	0.00	0.00	16.00	999.90	999.90
342	212th VGD	19-Dec-44	G	0.00	0.00	11.00	999.90	999.90
343	246th VGD	19-Dec-44	G	9.00	0.00	0.00	0.00	24.00
344	26th VGD	19-Dec-44	G	5.00	5.00	4.50	999.90	999.90
345	272d VGD	19-Dec-44	G	10.00	0.00	12.50	999.90	999.90
346	276th VGD	19-Dec-44	G	2.00	2.00	5.50	999.90	999.90
347	277th VGD	19-Dec-44	G	1.50	1.50	5.20	999.90	999.90
348	2d PzD	19-Dec-44	G	4.50	4.50	4.50	999.90	999.90
349	2d SSPzD	19-Dec-44	G	12.00	0.00	0.00	0.00	24.00
350	326th VGD	19-Dec-44	G	0.00	0.00	9.00	999.90	999.90
351	340th VGD	19-Dec-44	G	0.00	0.00	7.00	999.90	999.90
352	344th ID	19-Dec-44	G	0.00	0.00	0.00	0.00	24.00
353	352d VGD	19-Dec-44	G	4.00	4.00	5.00	999.90	999.90
354	353d ID	19-Dec-44	G	0.00	0.00	6.00	999.90	999.90
355	363d VGD	19-Dec-44	G	0.00	0.00	17.00	0.00	24.00
356	3d FJD	19-Dec-44	G	0.00	0.00	4.50	999.90	999.90
357	3d PzGD	19-Dec-44	G	13.50	0.00	0.00	0.00	24.00
358	47th VGD	19-Dec-44	G	0.00	0.00	9.50	0.00	24.00
359	560th VGD	19-Dec-44	G	7.00	7.00	7.00	999.90	999.90
360	5th FJD	19-Dec-44	G	7.50	7.50	6.50	999.90	999.90
361	5th PzArmy	19-Dec-44	G	3.80	3.80	88.50	999.90	999.90
362	62d VGD	19-Dec-44	G	3.00	3.00	7.00	999.90	999.90
363	6th PzArmy	19-Dec-44	G	1.50	1.50	24.50	999.90	999.90
364	7th Army	19-Dec-44	G	7.50	7.50	59.30	999.90	999.90
365	85th ID	19-Dec-44	G	0.00	0.00	6.00	0.00	24.00
366	89th ID	19-Dec-44	G	0.00	0.00	16.00	0.00	24.00
367	9th PzD	19-Dec-44	G	0.00	0.00	0.00	0.00	24.00
368	9th SSPzD	19-Dec-44	G	5.00	0.00	0.00	999.90	999.90
369	FBB	19-Dec-44	G	28.00	0.00	0.00	999.90	999.90
370	FGB	19-Dec-44	G	40.00	0.00	0.00	0.00	24.00
371	I SSPzK	19-Dec-44	G	0.00	0.00	17.50	999.90	999.90
372	II SSPzK	19-Dec-44	G	0.00	0.00	0.00	999.90	999.90
373	Korps Felber	19-Dec-44	G	0.00	0.00	7.00	0.00	24.00
374	LIII K	19-Dec-44	G	0.00	0.00	14.80	0.00	24.00
375	LVIII PzK	19-Dec-44	G	17.00	17.00	25.30	999.90	999.90
376	LXVI K	19-Dec-44	G	3.00	3.00	46.50	999.90	999.90
377	LXVII K	19-Dec-44	G	1.50	1.50	14.00	999.90	999.90
378	LXXIV K	19-Dec-44	G	0.00	0.00	38.00	0.00	24.00
379	LXXX K	19-Dec-44	G	2.00	2.00	19.90	999.90	999.90
380	LXXXI K	19-Dec-44	G	0.00	0.00	26.50	0.00	24.00
381	LXXXV K	19-Dec-44	G	7.50	7.50	19.40	999.90	999.90
382	PzLehrD	19-Dec-44	G	2.50	2.50	8.00	999.90	999.90
383	XII SSK	19-Dec-44	G	0.00	0.00	0.00	0.00	24.00
384	XLVII PzK	19-Dec-44	G	5.00	5.00	13.30	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
385	101st AbnD	20-Dec-44	A	5.80	-5.80	46.40	999.90	999.90
386	102d ID	20-Dec-44	A	0.00	0.00	6.30	0.00	24.00
387	104th ID	20-Dec-44	A	0.00	0.00	6.40	0.00	24.00
388	106th ID	20-Dec-44	A	0.00	0.00	26.10	999.90	999.90
389	10th AD	20-Dec-44	A	0.00	0.00	28.70	0.00	24.00
390	1st Army	20-Dec-44	A	11.80	-11.80	218.60	999.90	999.90
391	1st ID	20-Dec-44	A	0.00	0.00	14.50	999.90	999.90
392	26th ID	20-Dec-44	A	0.00	0.00	0.00	0.00	24.00
393	28th ID	20-Dec-44	A	9.30	-9.30	64.90	999.90	999.90
394	29th Arm Bde	20-Dec-44	B	0.00	0.00	0.00	0.00	24.00
395	29th ID	20-Dec-44	A	0.00	0.00	8.00	0.00	24.00
396	2d AD	20-Dec-44	A	0.00	0.00	10.50	0.00	24.00
397	2d ID	20-Dec-44	A	0.00	0.00	2.40	0.00	24.00
398	30th ID	20-Dec-44	A	2.00	2.00	25.00	999.90	999.90
399	3d AD	20-Dec-44	A	16.40	-3.00	0.00	999.90	999.90
400	3d Army	20-Dec-44	A	41.30	0.00	999.90	999.90	24.00
401	3d Cav Gp	20-Dec-44	A	0.00	0.00	18.00	0.00	24.00
402	43d ID	20-Dec-44	B	46.70	0.00	0.00	0.00	24.00
403	4th AD	20-Dec-44	A	999.90	0.00	0.00	999.90	999.90
404	4th ID	20-Dec-44	A	1.10	-1.10	45.50	999.90	999.90
405	53d ID	20-Dec-44	B	45.30	0.00	0.00	0.00	0.00
406	5th AD	20-Dec-44	A	4.00	4.00	5.70	999.90	999.90
407	78th ID	20-Dec-44	A	0.00	0.00	19.90	0.00	24.00
408	7th AD	20-Dec-44	A	3.10	-3.10	23.30	999.90	999.90
409	80th ID	20-Dec-44	A	16.30	0.00	0.00	0.00	24.00
410	82d AbnD	20-Dec-44	A	3.90	0.30	17.60	999.90	999.90
411	83d ID	20-Dec-44	A	0.00	0.00	5.30	0.00	24.00
412	84th ID	20-Dec-44	A	105.60	0.00	9.00	0.00	24.00
413	8th ID	20-Dec-44	A	0.00	0.00	19.10	0.00	24.00
414	90th ID	20-Dec-44	A	0.00	0.00	20.80	0.00	24.00
415	99th ID	20-Dec-44	A	0.00	0.00	4.30	999.90	999.90
416	9th AD	20-Dec-44	A	1.30	-1.30	11.20	999.90	999.90
417	9th Army	20-Dec-44	A	0.00	0.00	19.50	0.00	24.00
418	9th ID	20-Dec-44	A	0.00	0.00	8.40	0.00	24.00
419	Guards AD	20-Dec-44	B	0.00	0.00	0.00	0.00	24.00
420	III Corps	20-Dec-44	A	41.30	0.00	0.00	0.00	24.00
421	V Corps	20-Dec-44	A	0.00	0.00	54.80	999.90	999.90
422	VII Corps	20-Dec-44	A	0.30	0.30	44.50	999.90	999.90
423	VIII Corps	20-Dec-44	A	11.80	-11.80	131.70	999.90	999.90
424	XIII Corps	20-Dec-44	A	0.00	0.00	6.30	0.00	24.00
425	XIX Corps	20-Dec-44	A	2.10	0.00	11.80	0.00	24.00
426	XVIII Corps	20-Dec-44	A	31.50	0.00	32.80	999.90	999.90
427	XX Corps	20-Dec-44	A	0.00	0.00	999.90	0.00	24.00
428	XXX Corps	20-Dec-44	B	20.70	0.00	0.00	0.00	24.00
429	10th SSPzD	20-Dec-44	G	0.00	0.00	0.00	0.00	24.00
430	116th PzD	20-Dec-44	G	20.00	20.00	2.00	999.90	999.90
431	12th SSPzD	20-Dec-44	G	3.00	3.00	1.50	999.90	999.90
432	12th VGD	20-Dec-44	G	0.00	0.00	3.50	999.90	999.90
433	150th PzBde	20-Dec-44	G	0.00	0.00	3.00	0.00	24.00
434	15th Army	20-Dec-44	G	0.00	0.00	66.40	0.00	24.00
435	15th PzGD	20-Dec-44	G	0.00	0.00	0.00	0.00	24.00
436	167th VGD	20-Dec-44	G	0.00	0.00	0.00	0.00	24.00
437	18th VGD	20-Dec-44	G	0.00	0.00	5.00	999.90	999.90
438	1st SSPzD	20-Dec-44	G	0.00	0.00	18.00	999.90	999.90
439	212th VGD	20-Dec-44	G	0.00	0.00	11.00	999.90	999.90
440	246th VGD	20-Dec-44	G	7.00	0.00	0.00	0.00	24.00
441	26th VGD	20-Dec-44	G	12.00	12.00	3.00	999.90	999.90
442	272d VGD	20-Dec-44	G	0.00	0.00	0.00	0.00	24.00
443	276th VGD	20-Dec-44	G	3.50	3.50	5.50	999.90	999.90
444	277th VGD	20-Dec-44	G	1.00	1.00	5.00	999.90	999.90
445	2d PzD	20-Dec-44	G	17.00	17.00	7.50	999.90	999.90
446	2d SSPzD	20-Dec-44	G	34.50	0.00	0.00	0.00	24.00
447	326th VGD	20-Dec-44	G	5.00	5.00	9.00	999.90	999.90
448	340th VGD	20-Dec-44	G	0.00	0.00	7.00	999.90	999.90
449	344th ID	20-Dec-44	G	0.00	0.00	0.00	0.00	24.00

ACSDb (SECTION 20-24 DEC 44)

PART 2 OF 8

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
450	352d VGD	20-Dec-44	G	2.00	2.00	12.00	999.90	999.90
451	353d ID	20-Dec-44	G	0.00	0.00	6.00	999.90	999.90
452	363d VGD	20-Dec-44	G	0.00	0.00	17.00	0.00	24.00
453	3d FJD	20-Dec-44	G	2.50	2.50	4.50	999.90	999.90
454	3d PzGD	20-Dec-44	G	2.00	2.00	2.00	999.90	999.90
455	47th VGD	20-Dec-44	G	0.00	0.00	9.50	0.00	24.00
456	560th VGD	20-Dec-44	G	15.00	15.00	5.00	999.90	999.90
457	5th FJD	20-Dec-44	G	13.50	13.50	6.00	999.90	999.90
458	5th PzArmy	20-Dec-44	G	22.20	22.20	61.80	999.90	999.90
459	62d VGD	20-Dec-44	G	2.50	2.50	4.50	999.90	999.90
460	6th PzArmy	20-Dec-44	G	5.00	5.00	64.40	999.90	999.90
461	79th VGD	20-Dec-44	G	15.00	0.00	0.00	0.00	24.00
462	7th Army	20-Dec-44	G	13.50	13.50	61.50	999.90	999.90
463	85th ID	20-Dec-44	G	0.00	0.00	6.00	0.00	24.00
464	89th ID	20-Dec-44	G	0.00	0.00	16.00	0.00	24.00
465	9th PzD	20-Dec-44	G	0.00	0.00	0.00	0.00	24.00
466	9th SSPzD	20-Dec-44	G	0.00	0.00	1.00	999.90	999.90
467	FBB	20-Dec-44	G	5.00	5.00	2.50	999.90	999.90
468	FGB	20-Dec-44	G	0.00	0.00	0.00	0.00	24.00
469	I SSPzK	20-Dec-44	G	0.00	0.00	22.00	999.90	999.90
470	II SSPzK	20-Dec-44	G	2.50	0.00	11.50	999.90	999.90
471	Korps Felber	20-Dec-44	G	0.00	0.00	7.00	0.00	24.00
472	LIII K	20-Dec-44	G	58.00	0.00	14.80	0.00	24.00
473	LVIII PzK	20-Dec-44	G	20.00	20.00	14.70	999.90	999.90
474	LXVI K	20-Dec-44	G	5.00	5.00	17.00	999.90	999.90
475	LXVII K	20-Dec-44	G	5.00	5.00	14.00	999.90	999.90
476	LXXIV K	20-Dec-44	G	0.00	0.00	34.00	0.00	24.00
477	LXXX K	20-Dec-44	G	3.50	3.50	21.40	999.90	999.90
478	LXXXI K	20-Dec-44	G	0.00	0.00	32.50	0.00	24.00
479	LXXXV K	20-Dec-44	G	13.50	13.50	25.30	999.90	999.90
480	PzLehrD	20-Dec-44	G	7.00	0.50	3.00	999.90	999.90
481	XII SSK	20-Dec-44	G	0.00	0.00	0.00	0.00	24.00
482	XLVII PzK	20-Dec-44	G	17.00	17.00	10.80	999.90	999.90
483	101st AbnD	21-Dec-44	A	0.00	0.00	43.60	999.90	999.90
484	102d ID	21-Dec-44	A	0.00	0.00	13.00	0.00	24.00
485	104th ID	21-Dec-44	A	0.00	0.00	11.40	0.00	24.00
486	106th ID	21-Dec-44	A	0.00	0.00	26.10	999.90	999.90
487	10th AD	21-Dec-44	A	0.00	0.00	28.70	0.00	24.00
488	1st Army	21-Dec-44	A	5.10	-5.10	192.00	999.90	999.90
489	1st ID	21-Dec-44	A	0.00	0.00	16.20	999.90	999.90
490	26th ID	21-Dec-44	A	0.00	0.00	0.00	0.00	24.00
491	28th ID	21-Dec-44	A	8.20	-8.20	28.10	999.90	999.90
492	29th Arm Bde	21-Dec-44	B	28.30	0.00	35.60	0.00	24.00
493	29th ID	21-Dec-44	A	0.00	0.00	8.00	0.00	24.00
494	2d AD	21-Dec-44	A	84.00	0.00	0.00	0.00	24.00
495	2d ID	21-Dec-44	A	0.00	0.00	2.40	0.00	24.00
496	30th ID	21-Dec-44	A	999.90	0.00	24.60	12.00	12.00
497	3d AD	21-Dec-44	A	5.90	-5.90	14.20	999.00	999.90
498	3d Army	21-Dec-44	A	0.00	0.00	155.90	999.90	999.90
499	3d Cav Gp	21-Dec-44	A	0.00	0.00	18.00	0.00	24.00
500	43d ID	21-Dec-44	B	21.00	0.00	32.60	0.00	24.00
501	4th AD	21-Dec-44	A	0.00	0.00	12.80	0.00	24.00
502	4th ID	21-Dec-44	A	0.00	0.00	43.90	999.90	999.90
503	53d ID	21-Dec-44	B	0.00	0.00	39.70	0.00	24.00
504	5th AD	21-Dec-44	A	0.80	0.80	5.70	999.90	999.90
505	78th ID	21-Dec-44	A	0.00	0.00	19.90	0.00	24.00
506	7th AD	21-Dec-44	A	6.70	-6.70	25.40	999.90	999.90
507	80th ID	21-Dec-44	A	13.10	0.00	0.00	0.00	24.00
508	82d AbnD	21-Dec-44	A	11.20	-0.50	39.10	999.90	999.90
509	83d ID	21-Dec-44	A	0.00	0.00	5.30	0.00	24.00
510	84th ID	21-Dec-44	A	5.80	0.00	0.00	0.00	24.00
511	8th ID	21-Dec-44	A	0.00	0.00	19.10	0.00	24.00
512	90th ID	21-Dec-44	A	0.00	0.00	42.70	0.00	24.00
513	99th ID	21-Dec-44	A	0.00	0.00	4.30	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
514	9th AD	21-Dec-44	A	1.10	1.10	9.80	999.90	999.90
515	9th Army	21-Dec-44	A	0.00	0.00	24.50	0.00	24.00
516	9th ID	21-Dec-44	A	0.00	0.00	8.40	999.90	999.00
517	Guards AD	21-Dec-44	B	32.00	0.00	0.00	0.00	24.00
518	III Corps	21-Dec-44	A	0.00	0.00	18.70	0.00	24.00
519	V Corps	21-Dec-44	A	0.00	0.00	36.40	999.90	999.90
520	VII Corps	21-Dec-44	A	81.50	0.00	49.50	999.90	999.90
521	VIII Corps	21-Dec-44	A	0.00	0.00	56.30	999.90	999.90
522	XII Corps	21-Dec-44	A	0.00	0.00	49.80	999.90	999.90
523	XIII Corps	21-Dec-44	A	0.00	0.00	12.90	0.00	24.00
524	XIX Corps	21-Dec-44	A	21.10	0.00	8.00	0.00	24.00
525	XVIII Corps	21-Dec-44	A	5.10	-5.10	113.70	999.90	999.90
526	XX Corps	21-Dec-44	A	0.00	0.00	999.90	0.00	24.00
527	XXX Corps	21-Dec-44	B	4.60	0.00	0.00	0.00	24.00
528	10th SSPzD	21-Dec-44	G	0.00	0.00	0.00	0.00	24.00
529	116th PzD	21-Dec-44	G	4.50	4.50	9.00	999.90	999.90
530	12th SSPzD	21-Dec-44	G	0.00	0.00	2.50	999.90	999.90
531	12th VGD	21-Dec-44	G	0.00	0.00	5.00	999.90	999.90
532	150th PzBde	21-Dec-44	G	1.00	-1.00	3.00	9.00	15.00
533	15th Army	21-Dec-44	G	1.50	-1.50	71.20	999.90	999.90
534	15th PzGD	21-Dec-44	G	0.00	0.00	0.00	0.00	24.00
535	167th VGD	21-Dec-44	G	0.00	0.00	0.00	0.00	24.00
536	18th VGD	21-Dec-44	G	4.00	4.00	5.00	999.90	999.90
537	1st SSPzD	21-Dec-44	G	0.00	0.00	5.50	999.90	999.90
538	212th VGD	21-Dec-44	G	0.00	0.00	11.00	999.90	999.90
539	246th VGD	21-Dec-44	G	0.00	0.00	12.00	999.90	999.90
540	26th VGD	21-Dec-44	G	8.00	8.00	4.00	999.90	999.90
541	272d VGD	21-Dec-44	G	7.00	0.00	0.00	0.00	24.00
542	276th VGD	21-Dec-44	G	0.00	0.00	10.00	999.90	999.90
543	277th VGD	21-Dec-44	G	0.00	0.00	8.00	999.90	999.90
544	2d PzD	21-Dec-44	G	3.00	3.00	1.00	999.90	999.90
545	2d SSPzD	21-Dec-44	G	21.00	0.00	0.00	0.00	24.00
546	326th VGD	21-Dec-44	G	0.00	0.00	6.00	999.90	999.90
547	340th VGD	21-Dec-44	G	1.50	-1.50	7.00	999.90	999.90
548	344th ID	21-Dec-44	G	0.00	0.00	0.00	0.00	24.00
549	352d VGD	21-Dec-44	G	1.00	1.00	13.00	999.90	999.90
550	353d ID	21-Dec-44	G	0.00	0.00	6.00	999.90	999.90
551	363d VGD	21-Dec-44	G	0.00	0.00	17.00	0.00	24.00
552	3d FJD	21-Dec-44	G	0.50	0.50	3.50	999.90	999.90
553	3d PzGD	21-Dec-44	G	1.00	1.00	2.00	999.90	999.90
554	47th VGD	21-Dec-44	G	0.00	0.00	9.50	0.00	24.00
555	560th VGD	21-Dec-44	G	9.00	9.00	8.00	999.90	999.90
556	5th FJD	21-Dec-44	G	13.50	13.50	9.50	999.90	999.90
557	5th PzArmy	21-Dec-44	G	4.90	4.90	104.40	999.90	999.90
558	62d VGD	21-Dec-44	G	1.50	1.50	7.50	999.90	999.90
559	6th PzArmy	21-Dec-44	G	10.00	10.00	51.80	999.90	999.90
560	79th VGD	21-Dec-44	G	3.00	0.00	0.00	0.00	24.00
561	7th Army	21-Dec-44	G	13.50	13.50	74.40	999.90	999.90
562	85th ID	21-Dec-44	G	0.00	0.00	6.00	0.00	24.00
563	89th ID	21-Dec-44	G	0.00	0.00	16.00	0.00	24.00
564	9th PzD	21-Dec-44	G	0.00	0.00	0.00	0.00	24.00
565	9th SSPzD	21-Dec-44	G	10.00	1.00	1.00	999.90	999.90
566	F88	21-Dec-44	G	1.50	0.00	4.50	999.90	999.90
567	FGB	21-Dec-44	G	9.00	0.00	0.00	0.00	24.00
568	I SSPzK	21-Dec-44	G	10.00	10.00	10.50	999.90	999.90
569	II SSPzK	21-Dec-44	G	1.00	0.00	14.00	999.90	999.90
570	Korps Felber	21-Dec-44	G	1.50	-1.50	7.00	999.90	999.90
571	LIII K	21-Dec-44	G	13.50	13.50	22.80	999.90	999.90
572	LVIII PzK	21-Dec-44	G	9.00	9.00	19.40	999.90	999.90
573	LXVI K	21-Dec-44	G	4.00	4.00	17.00	999.90	999.90
574	LXVII K	21-Dec-44	G	0.00	0.00	8.00	0.00	24.00
575	LXXIV K	21-Dec-44	G	0.00	0.00	40.00	0.00	24.00
576	LXXX K	21-Dec-44	G	0.00	0.00	25.50	999.90	24.00
577	LXXXI K	21-Dec-44	G	0.00	0.00	32.50	0.00	24.00

ACSDB (SECTION 20-24 DEC 44)

PART 4 OF 8

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
578	LXXXV K	21-Dec-44	G	1.00	1.00	13.30	999.90	999.90
579	PzLehrD	21-Dec-44	G	10.00	10.00	7.50	999.90	999.90
580	XII SSK	21-Dec-44	G	0.00	0.00	0.00	0.00	24.00
581	XLVII PzK	21-Dec-44	G	10.00	10.00	12.60	999.90	999.90
582	101st Abnd	22-Dec-44	A	0.00	0.00	43.60	999.90	999.90
583	102d ID	22-Dec-44	A	0.00	0.00	13.00	0.00	24.00
584	104th ID	22-Dec-44	A	0.00	0.00	11.40	0.00	24.00
585	106th ID	22-Dec-44	A	22.30	-4.00	14.50	999.90	999.90
586	10th AD	22-Dec-44	A	16.20	0.00	28.70	0.00	24.00
587	1st Army	22-Dec-44	A	3.80	-3.80	188.20	999.90	999.90
588	1st ID	22-Dec-44	A	0.00	0.00	17.20	999.90	999.90
589	26th ID	22-Dec-44	A	19.60	0.00	0.00	999.90	999.90
590	28th ID	22-Dec-44	A	0.00	0.00	28.10	999.90	999.90
591	29th Arm Bde	22-Dec-44	B	0.00	0.00	35.60	0.00	24.00
592	29th ID	22-Dec-44	A	0.00	0.00	8.00	0.00	24.00
593	2d AD	22-Dec-44	A	0.00	0.00	0.00	0.00	24.00
594	2d ID	22-Dec-44	A	0.00	0.00	2.40	0.00	24.00
595	30th ID	22-Dec-44	A	1.30	1.30	24.60	1.00	23.00
596	3d AD	22-Dec-44	A	2.30	2.30	19.20	999.90	999.90
597	3d Army	22-Dec-44	A	24.00	2.00	270.70	999.90	999.90
598	3d Cav Gp	22-Dec-44	A	0.00	0.00	18.00	0.00	24.00
599	43d ID	22-Dec-44	B	0.00	0.00	4.00	0.00	24.00
600	4th AD	22-Dec-44	A	17.80	0.00	12.80	999.90	999.90
601	4th ID	22-Dec-44	A	0.00	0.00	43.90	999.90	999.90
602	53d ID	22-Dec-44	B	0.00	0.00	36.70	0.00	24.00
603	5th AD	22-Dec-44	A	0.10	0.10	6.00	999.90	999.90
604	5th ID	22-Dec-44	A	25.50	0.00	0.00	999.90	999.90
605	75th ID	22-Dec-44	A	0.00	0.00	0.00	0.00	24.00
606	78th ID	22-Dec-44	A	0.00	0.00	19.90	0.00	24.00
607	7th AD	22-Dec-44	A	4.90	-4.90	20.20	999.90	999.90
608	80th ID	22-Dec-44	A	17.70	0.00	999.90	999.90	999.90
609	82d Abnd	22-Dec-44	A	0.00	0.00	34.60	999.90	999.90
610	83d ID	22-Dec-44	A	0.00	0.00	7.30	0.00	24.00
611	84th ID	22-Dec-44	A	26.00	0.00	23.10	999.90	999.90
612	8th ID	22-Dec-44	A	0.00	0.00	19.10	0.00	24.00
613	90th ID	22-Dec-44	A	0.00	0.00	42.70	0.00	24.00
614	99th ID	22-Dec-44	A	0.00	0.00	4.30	999.90	999.90
615	9th AD	22-Dec-44	A	0.00	0.00	10.60	999.90	999.90
616	9th Army	22-Dec-44	A	0.00	0.00	56.10	999.90	24.00
617	9th ID	22-Dec-44	A	0.90	-0.90	8.60	5.00	19.00
618	Guards AD	22-Dec-44	B	0.00	0.00	26.10	0.00	24.00
619	III Corps	22-Dec-44	A	24.00	2.00	0.00	999.90	999.90
620	V Corps	22-Dec-44	A	38.10	0.00	36.40	999.90	999.90
621	VII Corps	22-Dec-44	A	26.10	4.30	65.30	999.90	999.90
622	VIII Corps	22-Dec-44	A	0.00	0.00	74.00	999.90	999.90
623	XII Corps	22-Dec-44	A	0.50	0.50	43.90	999.90	999.90
624	XIII Corps	22-Dec-44	A	0.00	0.00	24.40	0.00	24.00
625	XIX Corps	22-Dec-44	A	9.00	0.00	23.90	0.00	24.00
626	XVIII Corps	22-Dec-44	A	3.80	-3.80	113.70	999.90	999.90
627	XX Corps	22-Dec-44	A	999.90	0.00	999.90	0.00	24.00
628	XXX Corps	22-Dec-44	B	9.10	0.00	0.00	0.00	24.00
629	10th SSPzD	22-Dec-44	G	0.00	0.00	0.00	0.00	24.00
630	116th PzD	22-Dec-44	G	12.00	0.00	8.00	0.00	24.00
631	11th PzD	22-Dec-44	G	20.00	0.00	0.00	0.00	24.00
632	12th SSPzD	22-Dec-44	G	0.00	0.00	2.50	999.90	999.90
633	12th VGD	22-Dec-44	G	0.00	0.00	5.00	999.90	999.90
634	150th PzBde	22-Dec-44	G	0.00	0.00	3.50	999.90	999.90
635	15th Army	22-Dec-44	G	0.00	0.00	71.20	0.00	24.00
636	15th PzGD	22-Dec-44	G	30.00	0.00	0.00	0.00	24.00
637	167th VGD	22-Dec-44	G	0.00	0.00	0.00	0.00	24.00
638	18th VGD	22-Dec-44	G	3.00	3.00	4.00	999.90	999.90
639	1st SSPzD	22-Dec-44	G	0.00	0.00	5.50	999.90	999.90
640	212th VGD	22-Dec-44	G	0.00	0.00	11.00	999.90	999.90
641	246th VGD	22-Dec-44	G	0.00	0.00	12.00	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
642	26th VGD	22-Dec-44	G	1.00	1.00	23.50	999.90	999.90
643	272d VGD	22-Dec-44	G	0.00	0.00	0.00	0.00	24.00
644	276th VGD	22-Dec-44	G	0.00	0.00	10.00	0.00	24.00
645	277th VGD	22-Dec-44	G	0.00	0.00	6.50	999.90	999.90
646	2d PzD	22-Dec-44	G	18.00	18.00	10.50	999.90	999.90
647	2d SSPzD	22-Dec-44	G	24.50	0.00	0.00	0.00	24.00
648	326th VGD	22-Dec-44	G	0.00	0.00	6.00	999.90	999.90
649	340th VGD	22-Dec-44	G	0.00	0.00	9.50	999.90	999.90
650	344th ID	22-Dec-44	G	0.00	0.00	0.00	0.00	24.00
651	352d VGD	22-Dec-44	G	5.00	5.00	15.00	999.90	999.90
652	353d ID	22-Dec-44	G	0.00	0.00	6.00	999.90	999.90
653	363d VGD	22-Dec-44	G	0.00	0.00	17.00	0.00	24.00
654	3d FJD	22-Dec-44	G	0.00	0.00	6.00	999.90	999.90
655	3d PzGD	22-Dec-44	G	0.00	0.00	4.50	999.90	999.90
656	47th VGD	22-Dec-44	G	0.00	0.00	9.50	0.00	24.00
657	560th VGD	22-Dec-44	G	3.50	3.50	3.00	999.90	999.90
658	5th FJD	22-Dec-44	G	4.00	4.00	31.00	0.00	24.00
659	5th PzArmy	22-Dec-44	G	19.60	19.60	65.90	999.90	999.90
660	62d VGD	22-Dec-44	G	9.00	9.00	8.00	999.90	999.90
661	6th PzArmy	22-Dec-44	G	9.00	9.00	67.20	999.90	999.90
662	79th VGD	22-Dec-44	G	4.00	0.00	0.00	0.00	24.00
663	7th Army	22-Dec-44	G	5.00	5.00	76.00	999.90	999.90
664	85th ID	22-Dec-44	G	0.00	0.00	6.00	0.00	24.00
665	89th ID	22-Dec-44	G	0.00	0.00	16.00	0.00	24.00
666	9th PzD	22-Dec-44	G	30.00	0.00	0.00	0.00	24.00
667	9th SSPzD	22-Dec-44	G	0.00	0.00	5.00	999.90	999.90
668	FBB	22-Dec-44	G	1.50	1.50	2.00	999.90	999.90
669	FGB	22-Dec-44	G	13.00	0.00	0.00	0.00	24.00
670	I SSPzK	22-Dec-44	G	0.00	0.00	14.00	999.90	999.90
671	II SSPzK	22-Dec-44	G	0.00	0.00	8.50	999.90	999.90
672	Korps Felber	22-Dec-44	G	0.00	0.00	9.50	999.90	999.90
673	LIII K	22-Dec-44	G	4.00	4.00	29.90	999.90	24.00
674	LVIII PzK	22-Dec-44	G	3.50	3.50	13.50	999.90	999.90
675	LXVI K	22-Dec-44	G	9.00	9.00	14.00	999.90	999.90
676	LXVII K	22-Dec-44	G	0.00	0.00	17.00	0.00	24.00
677	LXXIV K	22-Dec-44	G	0.00	0.00	40.00	0.00	24.00
678	LXXX K	22-Dec-44	G	0.00	0.00	25.50	999.90	24.00
679	LXXXI K	22-Dec-44	G	0.00	0.00	32.50	0.00	24.00
680	LXXXV K	22-Dec-44	G	5.00	5.00	14.40	999.90	999.90
681	PzLehrD	22-Dec-44	G	26.00	26.00	11.50	999.90	999.90
682	XII SSK	22-Dec-44	G	0.00	0.00	0.00	0.00	24.00
683	XLVII PzK	22-Dec-44	G	26.00	26.00	34.00	999.90	999.90
684	101st AbnD	23-Dec-44	A	0.20	-0.20	51.40	999.90	999.90
685	102d ID	23-Dec-44	A	0.00	0.00	13.00	0.00	24.00
686	104th ID	23-Dec-44	A	0.00	0.00	11.40	0.00	24.00
687	106th ID	23-Dec-44	A	0.00	0.00	0.00	0.00	24.00
688	10th AD	23-Dec-44	A	8.00	8.00	28.70	999.90	999.90
689	1st Army	23-Dec-44	A	15.10	-15.10	152.10	999.90	999.90
690	1st ID	23-Dec-44	A	1.70	1.70	17.60	0.00	24.00
691	26th ID	23-Dec-44	A	3.20	3.20	8.50	999.90	999.90
692	28th ID	23-Dec-44	A	0.00	0.00	21.90	999.90	999.90
693	29th Arm Bde	23-Dec-44	B	0.00	0.00	36.90	0.00	24.00
694	29th ID	23-Dec-44	A	0.00	0.00	8.00	0.00	24.00
695	2d AD	23-Dec-44	A	18.90	0.00	0.00	999.90	999.90
696	2d ID	23-Dec-44	A	0.00	0.00	2.40	0.00	24.00
697	30th ID	23-Dec-44	A	3.70	2.00	22.80	999.90	999.90
698	3d AD	23-Dec-44	A	6.50	-6.50	26.20	999.90	999.90
699	3d Army	23-Dec-44	A	9.60	9.60	178.60	999.90	999.90
700	3d Cav Gp	23-Dec-44	A	0.00	0.00	18.00	0.00	24.00
701	43d ID	23-Dec-44	B	0.00	0.00	40.20	0.00	24.00
702	4th AD	23-Dec-44	A	4.30	4.30	9.00	999.90	999.90
703	4th ID	23-Dec-44	A	0.00	0.00	43.90	999.90	999.90
704	51st ID	23-Dec-44	B	29.80	0.00	0.00	0.00	24.00
705	53d ID	23-Dec-44	B	0.00	0.00	30.60	0.00	24.00

ACSDB (SECTION 20-24 DEC 44)

PART 6 OF 8

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
706	5th AD	23-Dec-44	A	14.60	0.00	6.10	0.00	24.00
707	5th ID	23-Dec-44	A	0.00	0.00	2.50	999.90	999.90
708	75th ID	23-Dec-44	A	0.00	0.00	0.00	0.00	24.00
709	78th ID	23-Dec-44	A	0.00	0.00	19.90	999.90	999.90
710	7th AD	23-Dec-44	A	17.30	-15.10	19.30	999.90	999.90
711	80th ID	23-Dec-44	A	2.40	2.40	8.90	999.90	999.90
712	82d AbnD	23-Dec-44	A	1.40	-1.40	36.60	999.90	999.90
713	83d ID	23-Dec-44	A	0.00	0.00	7.30	0.00	24.00
714	84th ID	23-Dec-44	A	2.20	-2.20	22.90	999.90	999.90
715	8th ID	23-Dec-44	A	1.30	1.30	19.10	999.90	999.90
716	90th ID	23-Dec-44	A	0.00	0.00	42.70	0.00	24.00
717	99th ID	23-Dec-44	A	0.00	0.00	4.30	0.00	24.00
718	9th AD	23-Dec-44	A	0.00	0.00	10.60	999.90	999.90
719	9th Army	23-Dec-44	A	2.80	2.80	72.50	999.90	999.90
720	9th ID	23-Dec-44	A	0.90	0.90	13.20	999.90	999.90
721	Guards AD	23-Dec-44	B	0.00	0.00	26.10	0.00	24.00
722	III Corps	23-Dec-44	A	9.60	9.60	40.70	999.90	999.90
723	V Corps	23-Dec-44	A	0.80	0.80	36.40	999.90	999.90
724	VII Corps	23-Dec-44	A	3.20	-3.20	29.60	999.90	999.90
725	VIII Corps	23-Dec-44	A	10.80	-10.80	74.00	999.90	999.90
726	XII Corps	23-Dec-44	A	0.00	0.00	43.40	999.90	999.90
727	XIII Corps	23-Dec-44	A	0.00	0.00	24.40	0.00	24.00
728	XIX Corps	23-Dec-44	A	2.80	2.80	49.30	999.90	999.90
729	XVIII Corps	23-Dec-44	A	15.10	-15.10	108.90	999.90	999.90
730	XX Corps	23-Dec-44	A	0.00	0.00	999.90	0.00	24.00
731	XXX Corps	23-Dec-44	B	3.80	0.00	0.00	0.00	24.00
732	10th SSPzD	23-Dec-44	G	0.00	0.00	0.00	0.00	24.00
733	116th PzD	23-Dec-44	G	12.50	12.50	0.00	999.90	999.90
734	11th PzD	23-Dec-44	G	0.00	0.00	0.00	0.00	24.00
735	12th SSPzD	23-Dec-44	G	0.00	0.00	2.50	999.90	999.90
736	12th VGD	23-Dec-44	G	0.00	0.00	5.00	0.00	24.00
737	150th PzBde	23-Dec-44	G	0.00	0.00	3.50	0.00	24.00
738	15th Army	23-Dec-44	G	7.10	0.00	71.20	0.00	24.00
739	15th PzGD	23-Dec-44	G	30.00	0.00	0.00	0.00	24.00
740	167th VGD	23-Dec-44	G	0.00	0.00	0.00	0.00	24.00
741	18th VGD	23-Dec-44	G	5.00	5.00	4.00	999.90	999.90
742	1st SSPzD	23-Dec-44	G	2.00	-2.00	5.50	999.90	999.90
743	212th VGD	23-Dec-44	G	1.50	1.50	11.00	999.90	999.90
744	248th VGD	23-Dec-44	G	0.00	0.00	12.00	999.90	999.90
745	26th VGD	23-Dec-44	G	2.50	2.50	28.00	999.90	999.90
746	272d VGD	23-Dec-44	G	13.00	0.00	0.00	0.00	24.00
747	276th VGD	23-Dec-44	G	0.00	0.00	10.00	0.00	24.00
748	277th VGD	23-Dec-44	G	0.00	0.00	6.50	999.90	999.90
749	2d PzD(-)	23-Dec-44	G	4.00	4.00	2.00	999.90	999.90
750	2d SSPzD	23-Dec-44	G	2.00	2.00	4.00	999.90	999.90
751	326th VGD	23-Dec-44	G	0.00	0.00	6.00	999.90	999.90
752	340th VGD	23-Dec-44	G	0.00	0.00	9.50	999.90	999.90
753	344th ID	23-Dec-44	G	0.00	0.00	0.00	0.00	24.00
754	352d VGD	23-Dec-44	G	0.00	0.00	13.00	999.90	999.90
755	353d ID	23-Dec-44	G	0.00	0.00	6.00	999.90	999.90
756	363d VGD	23-Dec-44	G	0.00	0.00	17.00	0.00	24.00
757	3d FJD	23-Dec-44	G	0.00	0.00	6.00	999.90	999.90
758	3d PzGD	23-Dec-44	G	0.00	0.00	4.50	0.00	24.00
759	47th VGD	23-Dec-44	G	0.00	0.00	9.50	0.00	24.00
760	560th VGD	23-Dec-44	G	0.00	0.00	14.00	999.90	999.90
761	5th FJD	23-Dec-44	G	0.00	0.00	38.00	999.90	999.90
762	5th PzArmy	23-Dec-44	G	23.10	23.10	93.70	999.90	999.90
763	62d VGD	23-Dec-44	G	5.00	5.00	17.00	999.90	999.90
764	6th PzArmy	23-Dec-44	G	10.00	10.00	88.20	999.90	999.90
765	79th VGD	23-Dec-44	G	4.50	-4.50	1.00	999.90	999.90
766	7th Army	23-Dec-44	G	4.50	-4.50	78.90	999.90	999.90
767	85th ID	23-Dec-44	G	0.00	0.00	6.00	0.00	24.00
768	89th ID	23-Dec-44	G	0.00	0.00	16.00	0.00	24.00
769	9th PzD	23-Dec-44	G	30.00	0.00	0.00	0.00	24.00

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
770	9th SSPzD	23-Dec-44	G	5.00	5.00	9.00	999.90	999.90
771	FBB	23-Dec-44	G	10.00	10.00	5.00	999.90	999.90
772	FGB	23-Dec-44	G	0.00	0.00	4.00	999.90	999.90
773	I SSPzK	23-Dec-44	G	2.00	-2.00	11.50	999.90	999.90
774	II SSPzK	23-Dec-44	G	5.00	5.00	13.00	999.90	999.90
775	KG Cochenhausen	23-Dec-44	G	23.50	23.50	2.00	999.90	999.90
776	Korps Felber	23-Dec-44	G	0.00	0.00	9.50	999.90	999.90
777	LIII K	23-Dec-44	G	0.00	0.00	38.60	999.90	999.90
778	LVIII PzK	23-Dec-44	G	12.50	12.50	14.70	999.90	999.90
779	LXVI K	23-Dec-44	G	10.00	10.00	25.00	999.90	999.90
780	LXVII K	23-Dec-44	G	0.00	0.00	32.00	0.00	24.00
781	LXXIV K	23-Dec-44	G	0.00	0.00	40.00	0.00	24.00
782	LXXX K	23-Dec-44	G	1.50	1.50	25.50	999.90	999.90
783	LXXXI K	23-Dec-44	G	0.00	0.00	32.50	0.00	24.00
784	LXXXV K	23-Dec-44	G	4.50	-4.50	23.40	999.90	999.90
785	PzLehrD	23-Dec-44	G	18.00	18.00	23.00	999.90	999.90
786	XII SSK	23-Dec-44	G	0.00	0.00	0.00	0.00	24.00
787	XLVII PzK	23-Dec-44	G	18.00	18.00	52.40	999.90	999.90
788	101st AbnD	24-Dec-44	A	0.00	0.00	51.40	999.90	999.90
789	102d ID	24-Dec-44	A	0.00	0.00	13.00	0.00	24.00
790	104th ID	24-Dec-44	A	0.00	0.00	11.40	0.00	24.00
791	106th ID	24-Dec-44	A	10.90	0.00	0.00	0.00	24.00
792	10th AD	24-Dec-44	A	11.00	11.00	21.90	999.90	999.90
793	1st Army	24-Dec-44	A	10.60	-10.60	118.60	999.90	999.90
794	1st ID	24-Dec-44	A	0.00	0.00	20.90	999.90	999.90
795	26th ID	24-Dec-44	A	1.80	1.80	13.60	999.90	999.90
796	28th ID	24-Dec-44	A	999.90	0.00	1.90	999.90	999.90
797	29th Arm Bde	24-Dec-44	B	0.00	0.00	28.00	0.00	0.00
798	29th ID	24-Dec-44	A	0.00	0.00	8.00	0.00	24.00
799	2d AD	24-Dec-44	A	2.40	2.40	6.40	999.90	999.90
800	2d ID	24-Dec-44	A	0.00	0.00	2.40	0.00	24.00
801	30th ID	24-Dec-44	A	2.50	2.50	22.70	999.90	999.90
802	3d AD	24-Dec-44	A	1.40	-1.40	28.20	999.90	999.90
803	3d Army	24-Dec-44	A	9.30	9.30	175.70	999.90	999.90
804	3d Cav Gp	24-Dec-44	A	0.00	0.00	18.00	0.00	24.00
805	43d ID	24-Dec-44	B	0.00	0.00	40.20	0.00	0.00
806	4th AD	24-Dec-44	A	2.40	2.40	11.40	999.90	999.90
807	4th ID	24-Dec-44	A	6.10	0.00	43.90	0.00	24.00
808	51st ID	24-Dec-44	B	0.00	0.00	0.00	0.00	24.00
809	53d ID	24-Dec-44	B	57.10	0.00	0.00	0.00	24.00
810	5th AD	24-Dec-44	A	11.70	0.00	0.00	0.00	24.00
811	5th ID	24-Dec-44	A	2.70	2.70	2.50	999.90	999.90
812	75th ID	24-Dec-44	A	5.90	0.00	14.30	0.00	24.00
813	78th ID	24-Dec-44	A	0.00	0.00	19.90	0.00	24.00
814	7th AD	24-Dec-44	A	4.40	-4.40	6.40	999.90	999.90
815	80th ID	24-Dec-44	A	2.70	2.70	14.60	999.90	999.90
816	82d AbnD	24-Dec-44	A	11.60	-11.60	28.20	999.90	999.90
817	83d ID	24-Dec-44	A	0.00	0.00	7.30	0.00	24.00
818	84th ID	24-Dec-44	A	1.20	-1.20	21.30	999.90	999.90
819	8th ID	24-Dec-44	A	0.00	0.00	18.10	0.00	24.00
820	90th ID	24-Dec-44	A	0.00	0.00	42.70	0.00	24.00
821	99th ID	24-Dec-44	A	0.00	0.00	4.30	0.00	24.00
822	9th AD	24-Dec-44	A	0.00	0.00	10.60	999.90	999.90
823	9th Army	24-Dec-44	A	0.00	0.00	72.50	999.90	999.90
824	9th ID	24-Dec-44	A	0.00	0.00	13.20	0.00	24.00
825	Guards AD	24-Dec-44	B	0.00	0.00	26.10	0.00	0.00
826	III Corps	24-Dec-44	A	9.30	9.30	39.00	999.90	999.90
827	V Corps	24-Dec-44	A	0.00	0.00	36.40	999.90	999.90
828	VII Corps	24-Dec-44	A	4.30	-4.30	61.60	999.90	999.90
829	VIII Corps	24-Dec-44	A	3.20	3.20	43.20	999.90	999.90
830	XII Corps	24-Dec-44	A	4.30	4.30	52.20	999.90	999.90
831	XIII Corps	24-Dec-44	A	0.00	0.00	24.40	0.00	24.00
832	XIX Corps	24-Dec-44	A	0.00	0.00	49.30	999.90	999.90
833	XVIII Corps	24-Dec-44	A	10.60	-10.60	58.70	999.90	999.90

ACSD8 (SECTION 20-24 DEC 44)

PART 8 OF 8

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
834	XX Corps	24-Dec-44	A	0.00	0.00	999.90	0.00	24.00
835	XXX Corps	24-Dec-44	B	1.50	2.00	0.00	0.00	0.00
836	10th SSPzD	24-Dec-44	G	0.00	0.00	0.00	0.00	24.00
837	116th PzD	24-Dec-44	G	1.00	1.00	8.00	999.90	999.90
838	11th PzD	24-Dec-44	G	0.00	0.00	0.00	0.00	24.00
839	12th SSPzD	24-Dec-44	G	31.00	0.00	2.50	0.00	24.00
840	12th VGD	24-Dec-44	G	0.00	0.00	5.00	0.00	24.00
841	150th PzBde	24-Dec-44	G	0.00	0.00	3.50	0.00	24.00
842	15th Army	24-Dec-44	G	2.00	-2.00	67.00	999.90	999.90
843	15th PzGD	24-Dec-44	G	33.00	0.00	0.00	0.00	24.00
844	167th VGD	24-Dec-44	G	42.50	0.00	0.00	0.00	24.00
845	18th VGD	24-Dec-44	G	11.00	0.00	8.50	999.90	999.90
846	1st SSPzD	24-Dec-44	G	2.00	-2.00	6.00	999.90	999.90
847	212th VGD	24-Dec-44	G	1.50	-1.50	18.00	999.90	999.90
848	246th VGD	24-Dec-44	G	9.00	0.00	12.00	999.90	999.90
849	26th VGD	24-Dec-44	G	0.00	0.00	27.00	0.00	24.00
850	272d VGD	24-Dec-44	G	0.00	0.00	8.50	0.00	24.00
851	276th VGD	24-Dec-44	G	2.50	2.50	10.00	999.90	999.90
852	277th VGD	24-Dec-44	G	0.00	0.00	6.50	999.90	999.90
853	2d PzD(-)	24-Dec-44	G	5.00	-1.00	15.00	999.90	999.90
854	2d SSPzD	24-Dec-44	G	4.00	4.00	6.00	999.90	999.90
855	326th VGD	24-Dec-44	G	0.00	0.00	6.00	999.90	999.90
856	340th VGD	24-Dec-44	G	0.00	0.00	9.50	999.90	999.90
857	344th ID	24-Dec-44	G	0.00	0.00	0.00	0.00	24.00
858	352d VGD	24-Dec-44	G	0.00	0.00	12.50	999.90	999.90
859	353d ID	24-Dec-44	G	1.50	-1.50	6.00	999.90	999.90
860	363d VGD	24-Dec-44	G	0.00	0.00	17.00	0.00	24.00
861	3d FJD	24-Dec-44	G	0.00	0.00	6.00	999.90	999.90
862	3d PzGD	24-Dec-44	G	0.00	0.00	4.50	0.00	24.00
863	47th VGD	24-Dec-44	G	0.00	0.00	9.50	0.00	24.00
864	560th VGD	24-Dec-44	G	0.00	0.00	14.00	0.00	24.00
865	5th FJD	24-Dec-44	G	4.00	-4.00	38.00	999.90	999.90
866	5th PzArmy	24-Dec-44	G	4.00	4.00	134.70	999.90	999.90
867	62d VGD	24-Dec-44	G	4.50	0.00	8.00	999.90	999.90
868	6th PzArmy	24-Dec-44	G	5.00	5.00	79.60	999.90	999.90
869	79th VGD	24-Dec-44	G	0.00	0.00	8.00	0.00	24.00
870	7th Army	24-Dec-44	G	4.00	-4.00	92.90	999.90	999.90
871	85th ID	24-Dec-44	G	2.00	-2.00	6.00	999.90	999.90
872	89th ID	24-Dec-44	G	0.00	0.00	7.50	0.00	24.00
873	9th PzD	24-Dec-44	G	30.00	0.00	0.00	0.00	24.00
874	9th SSPzD	24-Dec-44	G	5.00	5.00	4.00	999.90	999.90
875	9th VGD	24-Dec-44	G	0.00	0.00	0.00	0.00	24.00
876	FBB	24-Dec-44	G	8.50	0.00	5.50	999.90	999.90
877	FGB	24-Dec-44	G	2.00	-2.00	4.00	999.90	999.90
878	I SSPzK	24-Dec-44	G	2.00	-2.00	12.00	999.90	999.90
879	II SSPzK	24-Dec-44	G	5.00	5.00	10.00	999.90	999.90
880	KG Cochenhausen	24-Dec-44	G	0.00	0.00	19.00	999.90	999.90
881	Korps Felber	24-Dec-44	G	0.00	0.00	9.50	999.90	999.90
882	LIII K	24-Dec-44	G	4.00	-4.00	38.60	999.90	999.90
883	LVIII PzK	24-Dec-44	G	1.00	1.00	23.60	999.90	999.90
884	LXVI K	24-Dec-44	G	11.00	0.00	24.00	999.90	999.90
885	LXVII K	24-Dec-44	G	0.00	0.00	30.00	0.00	24.00
886	LXXIV K	24-Dec-44	G	2.00	-2.00	40.00	999.90	999.90
887	LXXX K	24-Dec-44	G	2.50	2.50	27.50	999.90	999.90
888	LXXXI K	24-Dec-44	G	1.50	-1.50	32.50	999.90	999.90
889	LXXXV K	24-Dec-44	G	2.00	-2.00	36.70	999.90	999.90
890	PzLehrD	24-Dec-44	G	5.00	5.00	2.50	999.90	999.90
891	XII SSK	24-Dec-44	G	0.00	0.00	0.00	0.00	24.00
892	XLVII PzK	24-Dec-44	G	5.00	5.00	83.50	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
893	101st AbnD	25-Dec-44	A	0.00	0.00	51.40	999.90	999.90
894	102d ID	25-Dec-44	A	0.00	0.00	13.00	0.00	24.00
895	104th ID	25-Dec-44	A	0.00	0.00	11.40	0.00	24.00
896	106th ID	25-Dec-44	A	0.00	0.00	0.00	0.00	24.00
897	10th AD	25-Dec-44	A	1.00	1.00	13.80	999.90	999.90
898	11th AD	25-Dec-44	A	0.00	0.00	0.00	0.00	24.00
899	1st Army	25-Dec-44	A	6.40	6.40	123.00	999.90	999.90
900	1st ID	25-Dec-44	A	0.00	0.00	20.90	999.90	999.90
901	26th ID	25-Dec-44	A	8.60	5.40	11.80	999.90	999.90
902	28th ID	25-Dec-44	A	0.00	0.00	1.90	0.00	24.00
903	29th Arm Bde	25-Dec-44	B	1.00	1.00	28.00	0.00	0.00
904	29th ID	25-Dec-44	A	0.00	0.00	8.00	0.00	24.00
905	2d AD	25-Dec-44	A	5.10	5.10	20.50	999.90	999.90
906	2d ID	25-Dec-44	A	0.00	0.00	2.40	0.00	24.00
907	30th ID	25-Dec-44	A	0.00	0.00	23.30	999.90	999.90
908	3d AD	25-Dec-44	A	2.50	-2.50	24.40	999.90	999.90
909	3d Army	25-Dec-44	A	6.30	-6.30	175.20	999.90	999.90
910	3d Cav Gp	25-Dec-44	A	0.00	0.00	18.00	0.00	24.00
911	43d ID	25-Dec-44	B	0.00	0.00	40.20	0.00	0.00
912	4th AD	25-Dec-44	A	13.00	3.60	31.70	999.90	999.90
913	4th ID	25-Dec-44	A	0.00	0.00	43.50	0.00	24.00
914	51st ID	25-Dec-44	B	0.00	0.00	0.00	0.00	24.00
915	53d ID	25-Dec-44	B	0.00	0.00	0.00	0.00	0.00
916	5th AD	25-Dec-44	A	0.00	0.00	0.00	0.00	24.00
917	5th ID	25-Dec-44	A	8.50	3.80	8.30	999.90	999.90
918	75th ID	25-Dec-44	A	0.00	0.00	14.30	0.00	24.00
919	78th ID	25-Dec-44	A	0.00	0.00	19.90	0.00	24.00
920	7th AD	25-Dec-44	A	0.00	0.00	4.30	999.90	999.90
921	80th ID	25-Dec-44	A	0.90	0.90	19.60	999.90	999.90
922	82d AbnD	25-Dec-44	A	0.00	0.00	17.40	999.90	999.90
923	83d ID	25-Dec-44	A	95.80	0.00	7.30	0.00	24.00
924	84th ID	25-Dec-44	A	1.20	1.20	22.10	999.90	999.90
925	8th ID	25-Dec-44	A	0.00	0.00	18.10	0.00	24.00
926	90th ID	25-Dec-44	A	0.00	0.00	42.70	0.00	24.00
927	99th ID	25-Dec-44	A	0.00	0.00	4.30	0.00	24.00
928	9th AD	25-Dec-44	A	0.00	0.00	10.60	0.00	24.00
929	9th Army	25-Dec-44	A	0.00	0.00	72.50	999.90	999.90
930	9th ID	25-Dec-44	A	0.00	0.00	13.20	999.90	999.90
931	Guards AD	25-Dec-44	B	0.00	0.00	26.10	0.00	24.00
932	III Corps	25-Dec-44	A	4.90	4.90	41.80	999.90	999.90
933	V Corps	25-Dec-44	A	0.00	0.00	36.40	0.00	24.00
934	VII Corps	25-Dec-44	A	6.40	6.40	67.00	999.90	999.90
935	VIII Corps	25-Dec-44	A	6.30	-6.30	44.20	999.90	999.90
936	XII Corps	25-Dec-44	A	0.80	0.80	50.30	999.90	999.90
937	XIII Corps	25-Dec-44	A	0.00	0.00	24.40	0.00	24.00
938	XIX Corps	25-Dec-44	A	0.00	0.00	49.30	999.90	999.90
939	XVIII Corps	25-Dec-44	A	0.00	0.00	36.20	999.90	999.90
940	XX Corps	25-Dec-44	A	0.00	0.00	999.90	0.00	24.00
941	XXX Corps	25-Dec-44	B	24.20	0.00	0.00	0.00	0.00
942	10th SSPzD	25-Dec-44	G	0.00	0.00	0.00	0.00	24.00
943	116th PzD	25-Dec-44	G	2.00	-2.00	8.00	999.90	999.90
944	11th PzD	25-Dec-44	G	0.00	0.00	0.00	0.00	24.00
945	12th SSPzD	25-Dec-44	G	22.00	0.00	0.00	0.00	24.00
946	12th VGD	25-Dec-44	G	0.00	0.00	6.50	0.00	24.00
947	150th PzBde	25-Dec-44	G	0.00	0.00	3.50	0.00	24.00
948	15th Army	25-Dec-44	G	0.00	0.00	70.00	0.00	24.00
949	15th PzGD	25-Dec-44	G	2.50	1.00	0.00	999.90	999.90
950	167th VGD	25-Dec-44	G	0.00	0.00	0.00	0.00	24.00
951	18th VGD	25-Dec-44	G	0.00	0.00	8.00	999.90	999.90
952	1st SSPzD	25-Dec-44	G	2.00	-2.00	11.00	999.90	999.90
953	212th VGD	25-Dec-44	G	5.00	-5.00	20.00	999.90	999.90
954	246th VGD	25-Dec-44	G	13.50	0.00	0.00	0.00	24.00
955	26th VGD	25-Dec-44	G	1.00	1.00	27.00	999.90	999.90
956	272d VGD	25-Dec-44	G	0.00	0.00	17.00	0.00	24.00
957	276th VGD	25-Dec-44	G	4.50	-4.50	8.00	999.90	999.90

ACSDB (SECTION 25-29 DEC 44)

PART 2 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
958	277th VGD	25-Dec-44	G	0.00	0.00	6.50	999.90	999.90
959	2d PzD(-)	25-Dec-44	G	18.50	4.00	0.00	999.90	999.90
960	2d SSPzD	25-Dec-44	G	1.00	1.00	7.00	999.90	999.90
961	326th VGD	25-Dec-44	G	0.00	0.00	6.00	999.90	999.90
962	340th VGD	25-Dec-44	G	7.50	0.00	9.50	999.90	999.90
963	344th ID	25-Dec-44	G	0.00	0.00	0.00	0.00	24.00
964	352d VGD	25-Dec-44	G	0.00	0.00	12.50	999.90	999.90
965	353d ID	25-Dec-44	G	0.00	0.00	9.50	999.90	999.90
966	363d VGD	25-Dec-44	G	0.00	0.00	17.00	0.00	24.00
967	3d FJD	25-Dec-44	G	0.00	0.00	6.00	999.90	999.90
968	3d PzGD	25-Dec-44	G	0.00	0.00	4.50	0.00	24.00
969	47th VGD	25-Dec-44	G	0.00	0.00	9.50	0.00	24.00
970	560th VGD	25-Dec-44	G	0.00	0.00	14.00	999.90	999.90
971	5th FJD	25-Dec-44	G	3.00	-3.00	30.00	999.90	999.90
972	5th PzArmy	25-Dec-44	G	7.30	-7.30	141.10	999.90	999.90
973	62d VGD	25-Dec-44	G	9.50	9.50	5.00	999.90	999.90
974	6th PzArmy	25-Dec-44	G	9.50	9.50	61.00	999.90	999.90
975	79th VGD	25-Dec-44	G	0.00	0.00	8.00	0.00	24.00
976	7th Army	25-Dec-44	G	5.00	-5.00	85.40	999.90	999.90
977	85th ID	25-Dec-44	G	0.00	0.00	1.50	0.00	24.00
978	89th ID	25-Dec-44	G	0.00	0.00	7.50	0.00	24.00
979	9th PzD	25-Dec-44	G	30.00	0.00	0.00	0.00	24.00
980	9th SSPzD	25-Dec-44	G	3.00	3.00	2.00	999.90	999.90
981	9th VGD	25-Dec-44	G	0.00	0.00	0.00	0.00	24.00
982	FBB	25-Dec-44	G	22.50	0.00	0.00	999.90	999.90
983	FGB	25-Dec-44	G	1.00	-1.00	5.50	999.90	999.90
984	I SSPzK	25-Dec-44	G	2.00	-2.00	14.50	999.90	999.90
985	II SSPzK	25-Dec-44	G	3.00	3.00	9.00	999.90	999.90
986	KG Cochenhausen	25-Dec-44	G	0.00	0.00	19.00	999.90	999.90
987	Korps Felber	25-Dec-44	G	0.00	0.00	9.50	999.90	999.90
988	LIII K	25-Dec-44	G	3.00	-3.00	40.50	999.90	999.90
989	LVIII PzK	25-Dec-44	G	2.00	-2.00	25.80	999.90	999.90
990	LXVI K	25-Dec-44	G	9.50	9.50	13.00	999.90	999.90
991	LXVII K	25-Dec-44	G	0.00	0.00	22.00	0.00	24.00
992	LXXIV K	25-Dec-44	G	0.00	0.00	32.00	0.00	24.00
993	LXXX K	25-Dec-44	G	5.00	-5.00	0.00	999.90	999.90
994	LXXXI K	25-Dec-44	G	0.00	0.00	36.00	0.00	24.00
995	LXXXV K	25-Dec-44	G	0.00	0.00	22.60	999.90	999.90
996	PzLehrD	25-Dec-44	G	0.00	0.00	6.00	999.90	999.90
997	XII SSK	25-Dec-44	G	0.00	0.00	0.00	0.00	24.00
998	XLVII PzK	25-Dec-44	G	4.00	4.00	64.00	999.90	999.90
999	101st AbnD	26-Dec-44	A	0.00	0.00	33.50	999.90	999.90
1000	102d ID	26-Dec-44	A	0.00	0.00	13.00	0.00	24.00
1001	104th ID	26-Dec-44	A	0.00	0.00	11.40	0.00	24.00
1002	106th ID	26-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1003	10th AD	26-Dec-44	A	28.20	0.00	27.30	0.00	24.00
1004	11th AD	26-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1005	17th AbnD	26-Dec-44	A	87.00	0.00	0.00	0.00	24.00
1006	1st Army	26-Dec-44	A	8.80	8.80	119.90	999.90	999.90
1007	1st ID	26-Dec-44	A	0.00	0.00	20.90	0.00	24.00
1008	26th ID	26-Dec-44	A	2.00	2.00	10.00	999.90	999.90
1009	28th ID	26-Dec-44	A	0.00	0.00	1.90	0.00	24.00
1010	29th Arm Bde	26-Dec-44	B	1.00	1.00	28.00	0.00	0.00
1011	29th ID	26-Dec-44	A	0.00	0.00	8.00	0.00	24.00
1012	2d AD	26-Dec-44	A	2.70	-2.70	26.80	999.90	999.90
1013	2d ID	26-Dec-44	A	0.00	0.00	2.40	0.00	24.00
1014	30th ID	26-Dec-44	A	0.00	0.00	23.30	999.90	999.90
1015	35th ID	26-Dec-44	A	6.90	0.00	0.00	0.00	24.00
1016	3d AD	26-Dec-44	A	2.60	2.60	24.80	999.90	999.90
1017	3d Army	26-Dec-44	A	3.60	3.60	168.40	999.90	999.90
1018	3d Cav Gp	26-Dec-44	A	0.00	0.00	18.00	0.00	24.00
1019	43d ID	26-Dec-44	B	0.00	0.00	28.70	0.00	24.00
1020	4th AD	26-Dec-44	A	0.00	0.00	16.60	999.90	999.90
1021	4th ID	26-Dec-44	A	1.80	0.00	43.50	0.00	24.00

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1022	51st ID	26-Dec-44	B	0.00	0.00	0.00	0.00	24.00
1023	53d ID	26-Dec-44	B	0.00	0.00	0.00	0.00	24.00
1024	5th AD	26-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1025	5th ID	26-Dec-44	A	3.20	3.00	14.10	999.90	999.90
1026	8th AD	26-Dec-44	A	70.90	0.00	0.00	0.00	24.00
1027	6th AbnD	26-Dec-44	B	0.00	0.00	0.00	0.00	24.00
1028	75th ID	26-Dec-44	A	0.00	0.00	3.60	0.00	24.00
1029	78th ID	26-Dec-44	A	0.00	0.00	19.90	0.00	24.00
1030	7th AD	26-Dec-44	A	0.70	0.70	4.30	999.90	999.90
1031	80th ID	26-Dec-44	A	1.20	1.20	20.20	999.90	999.90
1032	82d AbnD	26-Dec-44	A	0.00	0.00	17.40	999.90	999.90
1033	83d ID	26-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1034	84th ID	26-Dec-44	A	0.00	0.00	21.30	999.90	999.90
1035	8th ID	26-Dec-44	A	4.40	4.40	18.10	999.90	999.90
1036	90th ID	26-Dec-44	A	0.00	0.00	42.70	0.00	24.00
1037	99th ID	26-Dec-44	A	0.00	0.00	4.30	999.90	999.90
1038	9th AD	26-Dec-44	A	47.40	0.00	10.60	0.00	24.00
1039	9th Army	26-Dec-44	A	0.00	0.00	72.50	999.90	999.90
1040	9th ID	26-Dec-44	A	0.00	0.00	13.20	0.00	24.00
1041	Guards AD	26-Dec-44	B	0.00	0.00	37.80	0.00	24.00
1042	III Corps	26-Dec-44	A	3.60	3.60	60.80	999.90	999.90
1043	V Corps	26-Dec-44	A	0.00	0.00	36.40	0.00	24.00
1044	VII Corps	26-Dec-44	A	8.80	8.80	56.50	999.90	999.90
1045	VIII Corps	26-Dec-44	A	0.00	0.00	31.70	999.90	999.90
1046	XII Corps	26-Dec-44	A	1.70	1.70	63.90	999.90	999.90
1047	XIII Corps	26-Dec-44	A	0.00	0.00	24.40	0.00	24.00
1048	XIX Corps	26-Dec-44	A	0.00	0.00	49.30	999.90	999.90
1049	XVIII Corps	26-Dec-44	A	0.90	0.90	36.20	999.90	999.90
1050	XX Corps	26-Dec-44	A	0.00	0.00	999.90	0.00	24.00
1051	XXX Corps	26-Dec-44	B	15.90	3.20	0.00	0.00	0.00
1052	10th SSPzD	26-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1053	116th PzD	26-Dec-44	G	0.00	0.00	7.50	999.90	999.90
1054	11th PzD	26-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1055	12th SSPzD	26-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1056	12th VGD	26-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1057	150th PzBde	26-Dec-44	G	0.00	0.00	3.50	0.00	24.00
1058	15th Army	26-Dec-44	G	0.00	0.00	63.70	0.00	24.00
1059	15th PzGD	26-Dec-44	G	6.00	0.00	3.00	999.90	999.90
1060	167th VGD	26-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1061	18th VGD	26-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1062	1st SSPzD	26-Dec-44	G	0.00	0.00	11.00	999.90	999.90
1063	212th VGD	26-Dec-44	G	0.00	0.00	19.00	999.90	999.90
1064	246th VGD	26-Dec-44	G	5.50	0.00	0.00	0.00	24.00
1065	26th VGD	26-Dec-44	G	0.50	-0.50	23.00	999.90	999.90
1066	272d VGD	26-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1067	276th VGD	26-Dec-44	G	2.00	-2.00	4.00	999.90	999.90
1068	277th VGD	26-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1069	2d PzD(-)	26-Dec-44	G	15.00	-15.00	2.00	999.90	999.90
1070	2d SSPzD	26-Dec-44	G	2.00	2.00	7.00	999.90	999.90
1071	326th VGD	26-Dec-44	G	0.00	0.00	6.00	999.90	999.90
1072	340th VGD	26-Dec-44	G	17.00	0.00	0.00	0.00	24.00
1073	344th ID	26-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1074	352d VGD	26-Dec-44	G	0.00	0.00	15.50	999.90	999.90
1075	353d ID	26-Dec-44	G	0.00	0.00	9.50	999.90	999.90
1076	363d VGD	26-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1077	3d FJD	26-Dec-44	G	0.00	0.00	6.00	999.90	999.90
1078	3d PzGD	26-Dec-44	G	26.50	0.00	4.50	0.00	24.00
1079	47th VGD	26-Dec-44	G	0.00	0.00	9.50	0.00	24.00
1080	560th VGD	26-Dec-44	G	2.00	-2.00	14.00	999.90	999.90
1081	59th ID	26-Dec-44	G	19.00	0.00	5.00	0.00	24.00
1082	5th FJD	26-Dec-44	G	4.00	-4.00	26.00	999.90	999.90
1083	5th PzArmy	26-Dec-44	G	17.50	-17.50	146.20	999.90	999.90
1084	62d VGD	26-Dec-44	G	2.50	2.50	6.00	999.90	999.90
1085	6th PzArmy	26-Dec-44	G	5.00	5.00	59.40	999.90	999.90

ACSOB (SECTION 25-29 DEC 44)

PART 4 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE		FRONT WIDTH	TIME	
					OPPOSED ADVANCE			IV COMBAT	NO COMBAT
1086	79th VGD	26-Dec-44	G	0.00	0.00		8.00	0.00	24.00
1087	7th Army	26-Dec-44	G	4.00	-4.00		83.40	999.90	999.90
1088	85th ID	26-Dec-44	G	0.00	0.00		1.50	0.00	24.00
1089	89th ID	26-Dec-44	G	5.00	0.00		7.50	0.00	24.00
1090	9th PzD	26-Dec-44	G	2.00	-2.00		5.00	999.90	999.90
1091	9th SSPzD	26-Dec-44	G	5.00	5.00		3.00	999.90	999.90
1092	9th VGD	26-Dec-44	G	0.00	0.00		0.00	0.00	24.00
1093	F88	26-Dec-44	G	23.00	2.00		2.00	999.90	999.90
1094	F88	26-Dec-44	G	3.00	-3.00		8.00	999.90	999.90
1095	I SSPzK	26-Dec-44	G	0.00	0.00		14.50	999.90	999.90
1096	II SSPzK	26-Dec-44	G	5.00	5.00		10.00	999.90	999.90
1097	KG Cochenhausen	26-Dec-44	G	9.00	-9.00		8.00	999.90	999.90
1098	Korps Felber	26-Dec-44	G	0.00	0.00		11.50	999.90	999.90
1099	LIII K	26-Dec-44	G	4.00	-4.00		36.40	999.90	999.90
1100	LVIII PzK	26-Dec-44	G	0.00	0.00		27.70	999.90	999.90
1101	LXVI K	26-Dec-44	G	2.50	2.50		0.00	999.90	999.90
1102	LXVII K	26-Dec-44	G	0.00	0.00		22.00	0.00	24.00
1103	LXXIV K	26-Dec-44	G	0.00	0.00		32.00	0.00	24.00
1104	LXXX K	26-Dec-44	G	0.00	0.00		27.30	999.90	999.90
1105	LXXXI K	26-Dec-44	G	0.00	0.00		36.00	0.00	24.00
1106	LXXXV K	26-Dec-44	G	0.00	0.00		24.50	999.90	999.90
1107	PzLehrD	26-Dec-44	G	9.00	0.00		6.00	999.90	999.90
1108	XII SSK	26-Dec-44	G	0.00	0.00		0.00	0.00	24.00
1109	XLVII PzK	26-Dec-44	G	15.00	-15.00		58.80	999.90	999.90
1110	101st AbnD	27-Dec-44	A	0.00	0.00		33.50	999.90	999.90
1111	102d ID	27-Dec-44	A	0.00	0.00		13.00	0.00	24.00
1112	104th ID	27-Dec-44	A	0.00	0.00		11.40	0.00	24.00
1113	106th ID	27-Dec-44	A	0.00	0.00		0.00	0.00	24.00
1114	10th AD	27-Dec-44	A	0.00	0.00		0.00	0.00	24.00
1115	11th AD	27-Dec-44	A	0.00	0.00		0.00	0.00	24.00
1116	17th AbnD	27-Dec-44	A	74.50	0.00		0.00	0.00	24.00
1117	1st Army	27-Dec-44	A	5.40	5.40		120.50	999.90	999.90
1118	1st ID	27-Dec-44	A	0.00	0.00		20.90	0.00	24.00
1119	26th ID	27-Dec-44	A	0.50	0.50		14.10	999.90	999.90
1120	28th ID	27-Dec-44	A	54.50	0.00		0.00	0.00	24.00
1121	29th Arm Bde	27-Dec-44	B	0.00	0.00		28.00	0.00	0.00
1122	29th ID	27-Dec-44	A	0.00	0.00		8.00	0.00	24.00
1123	2d AD	27-Dec-44	A	5.90	5.90		25.70	999.90	999.90
1124	2d ID	27-Dec-44	A	0.00	0.00		2.40	0.00	24.00
1125	30th ID	27-Dec-44	A	0.00	0.00		25.10	0.00	24.00
1126	35th ID	27-Dec-44	A	6.60	6.60		10.00	999.90	999.90
1127	3d AD	27-Dec-44	A	0.00	0.00		17.00	999.90	999.90
1128	3d Army	27-Dec-44	A	5.90	5.90		171.20	999.90	999.90
1129	3d Cav Gp	27-Dec-44	A	0.00	0.00		18.00	0.00	24.00
1130	43d ID	27-Dec-44	B	28.00	0.00		0.00	0.00	24.00
1131	4th AD	27-Dec-44	A	0.00	0.00		37.30	999.90	999.90
1132	4th ID	27-Dec-44	A	0.70	0.00		38.10	0.00	24.00
1133	51st ID	27-Dec-44	B	0.00	0.00		0.00	0.00	24.00
1134	53d ID	27-Dec-44	B	0.00	0.00		8.50	0.00	24.00
1135	5th AD	27-Dec-44	A	0.00	0.00		0.00	0.00	24.00
1136	5th ID	27-Dec-44	A	4.00	4.00		16.10	999.90	999.90
1137	6th AD	27-Dec-44	A	0.00	0.00		13.60	0.00	24.00
1138	6th AbnD	27-Dec-44	B	0.00	0.00		0.00	0.00	24.00
1139	75th ID	27-Dec-44	A	15.60	0.00		3.60	0.00	24.00
1140	78th ID	27-Dec-44	A	0.00	0.00		19.90	0.00	24.00
1141	7th AD	27-Dec-44	A	0.00	0.00		3.10	3.70	20.30
1142	80th ID	27-Dec-44	A	0.00	0.00		22.00	999.90	999.90
1143	82d AbnD	27-Dec-44	A	0.00	0.00		17.40	4.00	20.00
1144	83d ID	27-Dec-44	A	25.90	0.00		0.00	0.00	24.00
1145	84th ID	27-Dec-44	A	0.00	0.00		21.30	999.90	999.90
1146	8th ID	27-Dec-44	A	0.00	0.00		16.80	999.90	999.90
1147	90th ID	27-Dec-44	A	0.00	0.00		42.70	0.00	24.00
1148	99th ID	27-Dec-44	A	0.00	0.00		4.30	0.00	24.00
1149	9th AD	27-Dec-44	A	8.00	8.00		2.90	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1150	9th Army	27-Dec-44	A	0.00	0.00	72.50	999.90	999.90
1151	9th ID	27-Dec-44	A	0.00	0.00	13.20	0.00	24.00
1152	Guards AD	27-Dec-44	B	0.00	0.00	40.20	0.00	24.00
1153	III Corps	27-Dec-44	A	5.90	5.90	59.70	999.90	999.90
1154	V Corps	27-Dec-44	A	0.00	0.00	36.40	0.00	24.00
1155	VII Corps	27-Dec-44	A	5.40	5.40	57.80	999.90	999.90
1156	VIII Corps	27-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1157	XII Corps	27-Dec-44	A	1.90	1.90	78.90	999.90	999.90
1158	XIII Corps	27-Dec-44	A	0.00	0.00	24.40	0.00	24.00
1159	XIX Corps	27-Dec-44	A	0.00	0.00	49.10	999.90	999.90
1160	XVIII Corps	27-Dec-44	A	0.00	0.00	35.20	999.90	999.90
1161	XX Corps	27-Dec-44	A	0.00	0.00	999.90	0.00	24.00
1162	XXX Corps	27-Dec-44	B	2.40	1.20	0.00	0.00	0.00
1163	10th SSPzD	27-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1164	118th PzD	27-Dec-44	G	2.50	-2.50	0.00	999.90	999.90
1165	11th PzD	27-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1166	12th SSPzD	27-Dec-44	G	8.50	3.00	0.00	999.90	999.90
1167	12th VGD	27-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1168	150th PzBde	27-Dec-44	G	0.00	0.00	3.50	0.00	24.00
1169	15th Army	27-Dec-44	G	0.00	0.00	94.30	0.00	24.00
1170	15th PzGD	27-Dec-44	G	1.00	-1.00	1.00	999.90	999.90
1171	167th VGD	27-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1172	18th VGD	27-Dec-44	G	9.00	0.00	0.00	0.00	24.00
1173	1st SSPzD	27-Dec-44	G	10.00	0.00	11.00	999.90	999.90
1174	212th VGD	27-Dec-44	G	0.00	0.00	19.00	999.90	999.90
1175	246th VGD	27-Dec-44	G	0.00	0.00	4.50	999.90	999.90
1176	26th VGD	27-Dec-44	G	1.00	-1.00	27.00	999.90	999.90
1177	272d VGD	27-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1178	276th VGD	27-Dec-44	G	0.00	0.00	5.00	0.00	24.00
1179	277th VGD	27-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1180	27th SSPzGD	27-Dec-44	G	1.00	0.00	0.00	0.00	24.00
1181	28th SSPzGD	27-Dec-44	G	1.00	0.00	0.00	0.00	24.00
1182	2d PzD	27-Dec-44	G	3.50	0.00	0.00	0.00	24.00
1183	2d SSPzD	27-Dec-44	G	2.00	-2.00	6.00	999.90	999.90
1184	326th VGD	27-Dec-44	G	0.00	0.00	6.00	999.90	999.90
1185	340th VGD	27-Dec-44	G	17.00	0.00	0.00	0.00	24.00
1186	344th ID	27-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1187	352d VGD	27-Dec-44	G	0.00	0.00	15.50	0.00	24.00
1188	353d ID	27-Dec-44	G	0.00	0.00	9.50	999.90	999.90
1189	363d VGD	27-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1190	3d FJD	27-Dec-44	G	0.00	0.00	10.00	999.90	999.90
1191	3d PzGD	27-Dec-44	G	30.00	0.00	0.00	0.00	24.00
1192	47th VGD	27-Dec-44	G	0.00	0.00	9.50	0.00	24.00
1193	560th VGD	27-Dec-44	G	1.00	-1.00	8.50	999.90	999.90
1194	59th ID	27-Dec-44	G	0.00	0.00	11.50	0.00	24.00
1195	5th FJD	27-Dec-44	G	1.50	-1.50	15.50	999.90	999.90
1196	5th PzArmy	27-Dec-44	G	3.10	3.10	99.70	999.90	999.90
1197	62d VGD	27-Dec-44	G	0.00	0.00	7.00	999.90	999.90
1198	6th PzArmy	27-Dec-44	G	3.00	3.00	41.10	999.90	999.90
1199	79th VGD	27-Dec-44	G	0.00	0.00	8.00	999.90	999.90
1200	7th Army	27-Dec-44	G	2.00	-2.00	77.10	999.90	999.90
1201	85th ID	27-Dec-44	G	0.00	0.00	9.00	0.00	24.00
1202	89th ID	27-Dec-44	G	12.50	0.00	0.00	0.00	24.00
1203	9th PzD	27-Dec-44	G	0.00	0.00	11.50	999.90	999.90
1204	9th SSPzD	27-Dec-44	G	0.00	0.00	7.00	999.90	999.90
1205	9th VGD	27-Dec-44	G	82.00	0.00	0.00	0.00	24.00
1206	FBB	27-Dec-44	G	11.00	-2.00	0.00	999.90	999.90
1207	FGB	27-Dec-44	G	2.00	-2.00	8.00	999.90	999.90
1208	I SSPzK	27-Dec-44	G	10.00	0.00	14.50	999.90	999.90
1209	II SSPzK	27-Dec-44	G	8.50	3.00	15.00	999.90	999.90
1210	Korps Felber	27-Dec-44	G	0.00	0.00	11.50	999.90	999.90
1211	LIII K	27-Dec-44	G	2.00	-2.00	26.10	999.90	999.90
1212	LVIII PzK	27-Dec-44	G	2.50	-2.50	15.40	999.90	999.90
1213	LXVI K	27-Dec-44	G	0.00	0.00	7.00	999.90	999.90

ACSDB (SECTION 25-29 DEC 44)

PART 6 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1214	LXVII K	27-Dec-44	G	0.00	0.00	26.00	0.00	24.00
1215	LXXIV K	27-Dec-44	G	0.00	0.00	32.00	0.00	24.00
1216	LXXX K	27-Dec-44	G	0.00	0.00	27.90	0.00	24.00
1217	LXXXI K	27-Dec-44	G	0.00	0.00	36.00	0.00	24.00
1218	LXXXV K	27-Dec-44	G	0.00	0.00	24.50	999.90	999.90
1219	PzLehrD	27-Dec-44	G	7.00	0.00	6.00	999.90	999.90
1220	XII SSK	27-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1221	XLVII PzK	27-Dec-44	G	3.50	-3.50	66.40	999.90	999.90
1222	101st AbnD	28-Dec-44	A	0.80	0.80	30.00	999.90	999.90
1223	102d ID	28-Dec-44	A	0.00	0.00	13.00	0.00	24.00
1224	104th ID	28-Dec-44	A	0.00	0.00	11.40	0.00	24.00
1225	106th ID	28-Dec-44	A	9.00	0.00	0.00	0.00	24.00
1226	10th AD	28-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1227	11th AD	28-Dec-44	A	39.00	0.00	0.00	0.00	24.00
1228	17th AbnD	28-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1229	1st Army	28-Dec-44	A	1.40	1.40	129.20	999.90	999.90
1230	1st ID	28-Dec-44	A	0.00	0.00	20.90	0.00	24.00
1231	26th ID	28-Dec-44	A	3.70	3.70	8.50	999.90	999.90
1232	28th ID	28-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1233	29th Arm Bde	28-Dec-44	B	22.80	0.00	18.50	0.00	24.00
1234	29th ID	28-Dec-44	A	0.00	0.00	8.00	0.00	24.00
1235	2d AD	28-Dec-44	A	22.30	0.00	34.00	999.90	999.90
1236	2d ID	28-Dec-44	A	0.00	0.00	2.40	0.00	24.00
1237	30th ID	28-Dec-44	A	0.00	0.00	25.10	0.00	24.00
1238	35th ID	28-Dec-44	A	3.40	3.40	8.60	999.90	999.90
1239	3d AD	28-Dec-44	A	1.40	1.40	17.00	999.90	999.90
1240	3d Army	28-Dec-44	A	3.80	3.80	165.00	999.90	999.90
1241	3d Cav Gp	28-Dec-44	A	0.00	0.00	18.00	0.00	24.00
1242	4th AD	28-Dec-44	A	2.00	2.00	27.60	999.90	999.90
1243	4th ID	28-Dec-44	A	0.80	0.00	37.40	0.00	24.00
1244	51st ID	28-Dec-44	B	0.00	0.00	0.00	0.00	24.00
1245	53d ID	28-Dec-44	B	0.00	0.00	8.50	0.00	0.00
1246	5th AD	28-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1247	5th ID	28-Dec-44	A	3.70	3.70	13.10	999.90	999.90
1248	6th AD	28-Dec-44	A	0.00	0.00	13.60	0.00	24.00
1249	6th AbnD	28-Dec-44	B	0.00	0.00	0.00	0.00	24.00
1250	75th ID	28-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1251	78th ID	28-Dec-44	A	0.00	0.00	19.90	0.00	24.00
1252	7th AD	28-Dec-44	A	0.00	0.00	3.10	0.00	24.00
1253	80th ID	28-Dec-44	A	999.90	0.00	20.00	999.90	999.90
1254	82d AbnD	28-Dec-44	A	0.00	0.00	17.40	999.90	999.90
1255	83d ID	28-Dec-44	A	0.60	0.60	14.90	999.90	999.90
1256	84th ID	28-Dec-44	A	0.00	0.00	21.30	0.00	24.00
1257	8th ID	28-Dec-44	A	0.00	0.00	16.80	999.90	999.90
1258	90th ID	28-Dec-44	A	0.00	0.00	42.70	0.00	24.00
1259	99th ID	28-Dec-44	A	0.00	0.00	4.30	0.00	24.00
1260	9th AD	28-Dec-44	A	1.20	1.20	3.30	999.90	999.90
1261	9th Army	28-Dec-44	A	0.00	0.00	72.50	999.90	999.90
1262	9th ID	28-Dec-44	A	0.00	0.00	13.20	999.90	999.90
1263	Guards AD	28-Dec-44	B	0.00	0.00	40.20	0.00	0.00
1264	III Corps	28-Dec-44	A	3.30	3.30	42.90	999.90	999.90
1265	V Corps	28-Dec-44	A	0.00	0.00	36.40	999.90	999.90
1266	VII Corps	28-Dec-44	A	1.40	1.40	66.60	999.90	999.90
1267	VIII Corps	28-Dec-44	A	18.10	0.00	3.00	999.90	999.90
1268	XII Corps	28-Dec-44	A	3.80	3.80	71.90	999.90	999.90
1269	XIII Corps	28-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1270	XIX Corps	28-Dec-44	A	0.00	0.00	49.10	999.90	999.90
1271	XVIII Corps	28-Dec-44	A	0.00	0.00	35.20	0.00	24.00
1272	XX Corps	28-Dec-44	A	0.00	0.00	999.90	0.00	24.00
1273	XXX Corps	28-Dec-44	B	5.90	1.00	0.00	0.00	0.00
1274	10th SSPzD	28-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1275	116th PzD	28-Dec-44	G	0.00	0.00	8.50	0.00	24.00
1276	11th PzD	28-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1277	12th SSPzD	28-Dec-44	G	0.00	0.00	2.50	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1278	12th VGD	28-Dec-44	G	15.00	0.00	6.50	0.00	24.00
1279	150th PzBde	28-Dec-44	G	19.50	0.00	3.50	0.00	24.00
1280	15th Army	28-Dec-44	G	0.00	0.00	94.30	999.90	999.90
1281	15th PzGD	28-Dec-44	G	4.00	0.00	0.00	0.00	24.00
1282	167th VGD	28-Dec-44	G	19.00	0.00	0.00	0.00	24.00
1283	18th VGD	28-Dec-44	G	0.00	0.00	15.00	999.90	999.90
1284	1st SSPzD	28-Dec-44	G	31.00	0.00	0.00	0.00	24.00
1285	212th VGD	28-Dec-44	G	0.00	0.00	19.00	999.90	999.90
1286	246th VGD	28-Dec-44	G	0.00	0.00	4.50	999.90	999.90
1287	26th VGD	28-Dec-44	G	1.00	-1.00	24.00	999.90	999.90
1288	272d VGD	28-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1289	276th VGD	28-Dec-44	G	0.00	0.00	5.00	0.00	24.00
1290	277th VGD	28-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1291	27th SSPzGD	28-Dec-44	G	2.00	0.00	0.00	0.00	24.00
1292	28th SSPzGD	28-Dec-44	G	2.00	0.00	0.00	0.00	24.00
1293	2d PzD	28-Dec-44	G	0.00	0.00	9.00	999.90	999.90
1294	2d SSPzD	28-Dec-44	G	7.00	0.00	5.50	999.90	999.90
1295	326th VGD	28-Dec-44	G	0.00	0.00	6.00	999.90	999.90
1296	340th VGD	28-Dec-44	G	17.00	0.00	0.00	0.00	24.00
1297	344th ID	28-Dec-44	G	20.00	0.00	0.00	0.00	24.00
1298	352d VGD	28-Dec-44	G	0.00	0.00	15.50	0.00	24.00
1299	353d ID	28-Dec-44	G	0.00	0.00	9.50	999.90	999.90
1300	363d VGD	28-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1301	3d FJD	28-Dec-44	G	0.00	0.00	10.00	999.90	999.90
1302	3d PzGD	28-Dec-44	G	13.50	0.00	0.00	0.00	24.00
1303	47th VGD	28-Dec-44	G	0.00	0.00	9.50	0.00	24.00
1304	560th VGD	28-Dec-44	G	1.50	-1.50	4.50	999.90	999.90
1305	59th ID	28-Dec-44	G	0.00	0.00	11.50	0.00	24.00
1306	5th FJD	28-Dec-44	G	0.00	0.00	13.00	999.90	999.90
1307	5th PzArmy	28-Dec-44	G	1.80	-1.80	96.80	999.90	999.90
1308	62d VGD	28-Dec-44	G	0.00	0.00	7.00	999.90	999.90
1309	6th PzArmy	28-Dec-44	G	1.50	-1.50	47.90	999.90	999.90
1310	79th VGD	28-Dec-44	G	0.00	0.00	8.00	0.00	24.00
1311	7th Army	28-Dec-44	G	2.00	-2.00	65.30	999.90	999.90
1312	85th ID	28-Dec-44	G	0.00	0.00	9.00	0.00	24.00
1313	89th ID	28-Dec-44	G	25.00	0.00	0.00	0.00	24.00
1314	9th PzD	28-Dec-44	G	0.00	0.00	15.00	0.00	24.00
1315	9th SSPzD	28-Dec-44	G	0.00	0.00	7.00	999.90	999.90
1316	9th VGD	28-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1317	FBB	28-Dec-44	G	0.00	0.00	4.50	999.90	999.90
1318	FGB	28-Dec-44	G	2.00	-2.00	10.00	999.90	999.90
1319	I SSPzK	28-Dec-44	G	31.00	0.00	3.50	999.90	999.90
1320	II SSPzK	28-Dec-44	G	1.50	-1.50	19.50	999.90	999.90
1321	Korps Felber	28-Dec-44	G	0.00	0.00	11.50	999.90	999.90
1322	LIII K	28-Dec-44	G	2.00	-2.00	24.90	999.90	999.90
1323	LVIII PzK	28-Dec-44	G	0.00	0.00	9.00	999.90	999.90
1324	LXVI K	28-Dec-44	G	0.00	0.00	22.00	0.00	24.00
1325	LXVII K	28-Dec-44	G	0.00	0.00	26.00	0.00	24.00
1326	LXXIV K	28-Dec-44	G	0.00	0.00	32.00	0.00	24.00
1327	LXXX K	28-Dec-44	G	0.00	0.00	27.90	0.00	24.00
1328	LXXXI K	28-Dec-44	G	0.00	0.00	36.00	0.00	24.00
1329	LXXXV K	28-Dec-44	G	0.00	0.00	24.50	999.90	999.90
1330	PzLehrD	28-Dec-44	G	0.00	0.00	24.50	999.90	999.90
1331	XII SSK	28-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1332	XLVII PzK	28-Dec-44	G	1.00	-1.00	89.40	999.90	999.90
1333	XXXIX PzK	28-Dec-44	G	19.00	0.00	0.00	0.00	24.00
1334	101st AbnD	29-Dec-44	A	2.00	2.00	27.00	999.90	999.90
1335	102d ID	29-Dec-44	A	0.00	0.00	13.00	0.00	24.00
1336	104th ID	29-Dec-44	A	0.00	0.00	11.40	0.00	24.00
1337	106th ID	29-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1338	11th AD	29-Dec-44	A	81.20	0.00	0.00	0.00	24.00
1339	17th AbnD	29-Dec-44	A	0.00	0.00	49.70	0.00	24.00
1340	1st Army	29-Dec-44	A	4.20	4.20	120.10	999.90	999.90
1341	1st ID	29-Dec-44	A	0.00	0.00	20.90	0.00	24.00

ACSD8 (SECTION 25-29 DEC 44)

PART 8 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1342	26th ID	29-Dec-44	A	1.40	1.40	10.00	999.90	999.90
1343	28th ID	29-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1344	29th Arm Bde	29-Dec-44	B	8.50	0.00	22.00	0.00	24.00
1345	29th ID	29-Dec-44	A	0.00	0.00	8.00	0.00	24.00
1346	2d AD	29-Dec-44	A	0.00	0.00	19.40	0.00	24.00
1347	2d ID	29-Dec-44	A	0.00	0.00	2.40	0.00	24.00
1348	30th ID	29-Dec-44	A	0.00	0.00	25.10	0.00	24.00
1349	35th ID	29-Dec-44	A	5.70	5.70	15.00	999.90	999.90
1350	3d AD	29-Dec-44	A	4.60	0.00	19.20	0.00	24.00
1351	3d Army	29-Dec-44	A	7.10	7.10	195.60	999.90	999.90
1352	3d Cav Gp	29-Dec-44	A	0.00	0.00	18.00	0.00	24.00
1353	4th AD	29-Dec-44	A	1.50	1.50	30.60	999.90	999.90
1354	4th ID	29-Dec-44	A	0.00	0.00	36.60	0.00	24.00
1355	51st ID	29-Dec-44	B	0.00	0.00	0.00	0.00	24.00
1356	53d ID	29-Dec-44	B	0.00	0.00	0.00	0.00	0.00
1357	5th AD	29-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1358	5th ID	29-Dec-44	A	0.00	0.00	15.00	0.00	24.00
1359	6th AD	29-Dec-44	A	45.70	0.00	13.60	0.00	24.00
1360	6th AbnD	29-Dec-44	B	0.00	0.00	7.80	0.00	0.00
1361	75th ID	29-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1362	7th AD	29-Dec-44	A	0.00	0.00	3.10	0.00	24.00
1363	80th ID	29-Dec-44	A	999.90	0.00	22.00	0.00	24.00
1364	82d AbnD	29-Dec-44	A	0.00	0.00	17.40	0.00	24.00
1365	83d ID	29-Dec-44	A	4.10	4.10	18.60	999.90	999.90
1366	84th ID	29-Dec-44	A	1.80	0.00	21.40	0.00	24.00
1367	87th ID	29-Dec-44	A	0.00	0.00	12.20	999.90	24.00
1368	8th ID	29-Dec-44	A	0.40	0.40	16.80	999.90	999.90
1369	90th ID	29-Dec-44	A	0.00	0.00	42.70	0.00	24.00
1370	99th ID	29-Dec-44	A	0.00	0.00	4.30	0.00	24.00
1371	9th AD	29-Dec-44	A	1.30	1.30	4.30	999.90	999.90
1372	9th Army	29-Dec-44	A	0.00	0.00	72.50	999.90	24.00
1373	9th ID	29-Dec-44	A	0.00	0.00	13.20	0.00	24.00
1374	Guards AD	29-Dec-44	B	0.00	0.00	40.20	0.00	24.00
1375	III Corps	29-Dec-44	A	2.80	2.80	56.50	999.90	999.90
1376	V Corps	29-Dec-44	A	0.00	0.00	36.40	0.00	24.00
1377	VII Corps	29-Dec-44	A	4.20	4.20	60.00	999.90	999.90
1378	VIII Corps	29-Dec-44	A	7.10	7.10	12.90	999.90	999.90
1379	XII Corps	29-Dec-44	A	0.00	0.00	79.40	0.00	24.00
1380	XIII Corps	29-Dec-44	A	999.90	0.00	24.40	0.00	24.00
1381	XIX Corps	29-Dec-44	A	0.00	0.00	49.10	0.00	24.00
1382	XVIII Corps	29-Dec-44	A	1.80	-1.80	35.20	0.00	24.00
1383	XX Corps	29-Dec-44	A	0.00	0.00	999.90	0.00	24.00
1384	XXX Corps	29-Dec-44	B	2.30	0.00	34.00	0.00	0.00
1385	10th SSPzD	29-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1386	116th PzD	29-Dec-44	G	0.00	0.00	8.50	0.00	24.00
1387	11th PzD	29-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1388	12th SSPzD	29-Dec-44	G	0.00	0.00	2.50	999.90	999.90
1389	12th VGD	29-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1390	150th PzBde	29-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1391	15th Army	29-Dec-44	G	0.00	0.00	94.30	0.00	24.00
1392	15th PzGD	29-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1393	167th VGD	29-Dec-44	G	2.00	0.00	0.00	0.00	24.00
1394	18th VGD	29-Dec-44	G	0.00	0.00	15.00	999.90	999.90
1395	1st SSPzD	29-Dec-44	G	9.50	0.00	0.00	0.00	24.00
1396	212th VGD	29-Dec-44	G	3.00	-3.00	19.00	999.90	999.90
1397	246th VGD	29-Dec-44	G	0.00	0.00	4.50	999.90	999.90
1398	26th VGD	29-Dec-44	G	0.00	0.00	21.50	0.00	24.00
1399	272d VGD	29-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1400	276th VGD	29-Dec-44	G	3.00	-3.00	0.00	999.90	999.90
1401	277th VGD	29-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1402	27th SSPzGD	29-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1403	28th SSPzGD	29-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1404	2d PzD	29-Dec-44	G	4.00	0.00	9.00	999.90	999.90
1405	2d SSPzD	29-Dec-44	G	0.00	0.00	7.50	0.00	24.00

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1406	326th VGD	29-Dec-44	G	0.00	0.00	6.00	999.90	999.90
1407	340th VGD	29-Dec-44	G	17.00	0.00	0.00	0.00	24.00
1408	352d VGD	29-Dec-44	G	0.00	0.00	15.50	0.00	24.00
1409	353d ID	29-Dec-44	G	0.00	0.00	9.50	999.90	999.90
1410	363d VGD	29-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1411	3d FJD	29-Dec-44	G	0.00	0.00	10.00	999.90	999.90
1412	3d PzGD	29-Dec-44	G	0.00	0.00	3.50	999.90	999.90
1413	47th VGD	29-Dec-44	G	0.00	0.00	9.50	0.00	24.00
1414	560th VGD	29-Dec-44	G	1.50	-1.50	5.00	999.90	999.90
1415	59th ID	29-Dec-44	G	0.00	0.00	11.50	0.00	24.00
1416	5th FJD	29-Dec-44	G	0.00	0.00	13.00	999.90	999.90
1417	5th PzArmy	29-Dec-44	G	7.50	-7.50	87.40	999.90	999.90
1418	62d VGD	29-Dec-44	G	0.00	0.00	7.00	999.90	999.90
1419	6th PzArmy	29-Dec-44	G	1.50	-1.50	48.40	999.90	999.90
1420	79th VGD	29-Dec-44	G	0.00	0.00	8.00	0.00	24.00
1421	7th Army	29-Dec-44	G	1.00	-1.00	76.30	999.90	999.90
1422	85th ID	29-Dec-44	G	0.00	0.00	9.00	0.00	24.00
1423	89th ID	29-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1424	9th PzD	29-Dec-44	G	3.50	-3.50	15.00	999.90	999.90
1425	9th SSPzD	29-Dec-44	G	0.00	0.00	7.00	999.90	999.90
1426	9th VGD	29-Dec-44	G	4.00	0.00	0.00	0.00	24.00
1427	FBB	29-Dec-44	G	0.00	0.00	4.50	999.90	999.90
1428	FGB	29-Dec-44	G	1.00	-1.00	12.00	999.90	999.90
1429	I SSPzK	29-Dec-44	G	4.50	0.00	0.00	999.90	999.90
1430	II SSPzK	29-Dec-44	G	1.50	-1.50	22.00	999.90	999.90
1431	Korps Felber	29-Dec-44	G	0.00	0.00	11.50	999.90	999.90
1432	LIII K	29-Dec-44	G	1.00	-1.00	27.20	999.90	999.90
1433	LVIII PzK	29-Dec-44	G	3.50	-3.50	25.50	999.90	999.90
1434	LXVI K	29-Dec-44	G	0.00	0.00	22.00	0.00	24.00
1435	LXVII K	29-Dec-44	G	0.00	0.00	27.40	0.00	24.00
1436	LXXIV K	29-Dec-44	G	0.00	0.00	32.00	0.00	24.00
1437	LXXX K	29-Dec-44	G	3.00	0.00	27.90	0.00	24.00
1438	LXXXI K	29-Dec-44	G	0.00	0.00	36.00	0.00	24.00
1439	LXXXV K	29-Dec-44	G	0.00	0.00	24.50	999.90	999.90
1440	PzLehrD	29-Dec-44	G	0.00	0.00	24.50	999.90	999.90
1441	XII SSK	29-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1442	XLVII PzK	29-Dec-44	G	0.00	0.00	56.30	0.00	24.00
1443	XXXIX PzK	29-Dec-44	G	2.00	0.00	0.00	0.00	24.00

ACSDB (SECTION 30 DEC 44 - 03 JAN 45)

PART 1 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1444	101st AbnD	30-Dec-44	A	1.50	1.50	17.40	0.00	24.00
1445	102d ID	30-Dec-44	A	0.00	0.00	13.00	999.90	999.90
1446	104th ID	30-Dec-44	A	0.00	0.00	11.40	0.00	24.00
1447	106th ID	30-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1448	11th AD	30-Dec-44	A	13.70	0.00	0.00	999.90	999.90
1449	17th AbnD	30-Dec-44	A	0.00	0.00	49.70	0.00	24.00
1450	1st Army	30-Dec-44	A	0.00	0.00	121.30	999.90	999.90
1451	1st ID	30-Dec-44	A	0.00	0.00	20.90	0.00	24.00
1452	28th ID	30-Dec-44	A	999.90	1.80	10.30	999.90	999.90
1453	28th ID	30-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1454	29th Arm Bde	30-Dec-44	B	3.00	3.00	25.00	0.00	24.00
1455	29th ID	30-Dec-44	A	0.00	0.00	8.00	0.00	24.00
1456	2d AD	30-Dec-44	A	18.60	0.00	19.40	0.00	24.00
1457	2d ID	30-Dec-44	A	0.00	0.00	2.40	0.00	24.00
1458	30th ID	30-Dec-44	A	0.00	0.00	25.10	0.00	24.00
1459	35th ID	30-Dec-44	A	2.00	-2.00	13.20	999.90	999.90
1460	3d AD	30-Dec-44	A	0.00	0.00	3.70	0.00	24.00
1461	3d Army	30-Dec-44	A	4.80	4.80	174.20	999.90	999.90
1462	3d Cav Gp	30-Dec-44	A	0.00	0.00	18.00	0.00	24.00
1463	4th AD	30-Dec-44	A	2.30	2.30	20.90	999.90	999.90
1464	4th ID	30-Dec-44	A	0.00	0.00	36.60	0.00	24.00
1465	51st ID	30-Dec-44	B	0.00	0.00	0.00	0.00	24.00
1466	53d ID	30-Dec-44	B	93.50	0.00	0.00	0.00	0.00
1467	5th AD	30-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1468	5th ID	30-Dec-44	A	0.00	0.00	15.00	0.00	24.00
1469	6th AD	30-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1470	6th AbnD	30-Dec-44	B	0.00	0.00	0.00	0.00	0.00
1471	75th ID	30-Dec-44	A	0.00	0.00	0.00	999.90	999.90
1472	78th ID	30-Dec-44	A	0.00	0.00	19.90	0.00	24.00
1473	7th AD	30-Dec-44	A	14.50	0.00	3.10	0.00	24.00
1474	80th ID	30-Dec-44	A	0.00	0.00	22.00	999.90	999.90
1475	82d AbnD	30-Dec-44	A	0.00	0.00	17.40	0.00	24.00
1476	83d ID	30-Dec-44	A	0.00	0.00	23.80	999.90	999.90
1477	84th ID	30-Dec-44	A	0.00	0.00	21.60	0.00	24.00
1478	87th ID	30-Dec-44	A	4.80	4.80	4.10	999.90	999.90
1479	8th ID	30-Dec-44	A	0.00	0.00	17.10	999.90	999.90
1480	90th ID	30-Dec-44	A	0.00	0.00	42.70	0.00	24.00
1481	99th ID	30-Dec-44	A	0.00	0.00	4.30	0.00	24.00
1482	9th AD	30-Dec-44	A	1.70	-1.70	3.50	999.90	999.90
1483	9th Army	30-Dec-44	A	0.00	0.00	72.50	999.90	24.00
1484	9th ID	30-Dec-44	A	0.00	0.00	13.20	0.00	24.00
1485	Guards AD	30-Dec-44	B	0.00	0.00	40.20	0.00	0.00
1486	III Corps	30-Dec-44	A	1.80	-1.80	24.80	999.90	999.90
1487	V Corps	30-Dec-44	A	0.00	0.00	38.40	0.00	24.00
1488	VII Corps	30-Dec-44	A	0.00	0.00	49.80	999.90	999.90
1489	VIII Corps	30-Dec-44	A	4.80	4.80	41.20	999.90	999.90
1490	XII Corps	30-Dec-44	A	3.00	3.00	79.60	999.90	999.90
1491	XIII Corps	30-Dec-44	A	4.00	4.00	24.40	0.00	24.00
1492	XIX Corps	30-Dec-44	A	0.00	0.00	49.10	0.00	24.00
1493	XVIII Corps	30-Dec-44	A	0.00	0.00	35.20	0.00	24.00
1494	XX Corps	30-Dec-44	A	0.00	0.00	999.90	0.00	24.00
1495	XXX Corps	30-Dec-44	B	4.30	0.00	999.90	999.90	999.90
1496	10th SSPzD	30-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1497	116th PzD	30-Dec-44	G	0.00	0.00	8.50	0.00	24.00
1498	11th PzD	30-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1499	12th SSPzD	30-Dec-44	G	8.00	0.00	2.50	0.00	24.00
1500	12th VGD	30-Dec-44	G	18.00	0.00	0.00	0.00	24.00
1501	150th PzBde	30-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1502	15th Army	30-Dec-44	G	0.00	0.00	94.30	0.00	24.00
1503	15th PzGD	30-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1504	167th VGD	30-Dec-44	G	0.00	0.00	5.00	999.90	999.90
1505	18th VGD	30-Dec-44	G	0.00	0.00	15.00	999.90	999.90
1506	1st SSPzD	30-Dec-44	G	0.00	0.00	2.00	999.90	999.90
1507	212th VGD	30-Dec-44	G	0.00	0.00	35.00	0.00	24.00
1508	246th VGD	30-Dec-44	G	0.00	0.00	4.50	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NC COMBAT
1509	26th VGD	30-Dec-44	G	1.00	-1.00	21.50	999.90	999.90
1510	272d VGD	30-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1511	276th VGD	30-Dec-44	G	0.00	0.00	10.50	0.00	24.00
1512	277th VGD	30-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1513	27th SSPzGD	30-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1514	28th SSPzGD	30-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1515	2d PzD	30-Dec-44	G	0.00	0.00	6.50	999.90	999.90
1516	2d SSPzD	30-Dec-44	G	0.00	0.00	4.00	0.00	24.00
1517	326th VGD	30-Dec-44	G	0.00	0.00	6.00	999.90	999.90
1518	340th VGD	30-Dec-44	G	17.00	0.00	0.00	0.00	24.00
1519	352d VGD	30-Dec-44	G	0.00	0.00	15.50	0.00	24.00
1520	353d ID	30-Dec-44	G	0.00	0.00	9.50	999.90	999.90
1521	363d VGD	30-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1522	3d FJD	30-Dec-44	G	0.00	0.00	10.00	999.90	999.90
1523	3d PzGD	30-Dec-44	G	0.00	0.00	3.50	999.90	999.90
1524	47th VGD	30-Dec-44	G	0.00	0.00	9.50	0.00	24.00
1525	560th VGD	30-Dec-44	G	0.00	0.00	12.00	999.90	999.90
1526	59th ID	30-Dec-44	G	0.00	0.00	11.50	0.00	24.00
1527	5th FJD	30-Dec-44	G	0.00	0.00	11.00	999.90	999.90
1528	5th PzArmy	30-Dec-44	G	0.00	0.00	78.40	999.90	999.90
1529	62d VGD	30-Dec-44	G	0.00	0.00	7.00	999.90	999.90
1530	6th PzArmy	30-Dec-44	G	0.00	0.00	46.20	999.90	999.90
1531	79th VGD	30-Dec-44	G	0.00	0.00	8.00	0.00	24.00
1532	7th Army	30-Dec-44	G	0.00	0.00	93.20	999.90	999.90
1533	85th ID	30-Dec-44	G	0.00	0.00	9.00	0.00	24.00
1534	89th ID	30-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1535	9th PzD	30-Dec-44	G	0.00	0.00	12.50	999.90	999.90
1536	9th SSPzD	30-Dec-44	G	0.00	0.00	7.00	999.90	999.90
1537	9th VGD	30-Dec-44	G	3.00	0.00	0.00	999.90	999.90
1538	FBB	30-Dec-44	G	2.00	-2.00	4.50	999.90	999.90
1539	FGB	30-Dec-44	G	0.00	0.00	14.50	999.90	999.90
1540	I SSPzK	30-Dec-44	G	9.00	0.00	0.00	999.90	999.90
1541	II SSPzK	30-Dec-44	G	0.00	0.00	23.00	999.90	999.90
1542	Korps Felber	30-Dec-44	G	0.00	0.00	11.50	999.90	999.90
1543	LIII K	30-Dec-44	G	0.00	0.00	24.50	999.90	999.90
1544	LVIII PzK	30-Dec-44	G	0.00	0.00	29.60	999.90	999.90
1545	LXVI K	30-Dec-44	G	0.00	0.00	22.00	0.00	24.00
1546	LXVII K	30-Dec-44	G	0.00	0.00	27.40	0.00	24.00
1547	LXXIV K	30-Dec-44	G	0.00	0.00	32.00	0.00	24.00
1548	LXXX K	30-Dec-44	G	0.00	0.00	40.80	0.00	24.00
1549	LXXXI K	30-Dec-44	G	0.00	0.00	36.00	0.00	24.00
1550	LXXXV K	30-Dec-44	G	0.00	0.00	24.50	999.90	999.90
1551	PzLehrD	30-Dec-44	G	3.00	-3.00	21.00	999.90	999.90
1552	XII SSK	30-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1553	XLVII PzK	30-Dec-44	G	3.00	-3.00	0.00	999.90	999.90
1554	XXXIX PzK	30-Dec-44	G	1.00	1.00	7.10	999.90	999.90
1555	101st AbnD	31-Dec-44	A	0.00	0.00	17.40	0.00	24.00
1556	102d ID	31-Dec-44	A	0.00	0.00	13.00	0.00	24.00
1557	104th ID	31-Dec-44	A	0.00	0.00	11.40	0.00	24.00
1558	106th ID	31-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1559	11th AD	31-Dec-44	A	1.80	1.80	9.20	999.90	999.90
1560	17th AbnD	31-Dec-44	A	0.00	0.00	49.70	0.00	24.00
1561	1st Army	31-Dec-44	A	1.80	1.80	121.30	999.90	999.90
1562	1st ID	31-Dec-44	A	0.00	0.00	20.90	0.00	24.00
1563	26th ID	31-Dec-44	A	0.00	0.00	8.00	999.90	999.90
1564	28th ID	31-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1565	29th Arm Bde	31-Dec-44	B	2.00	2.00	25.00	0.00	24.00
1566	29th ID	31-Dec-44	A	0.00	0.00	8.00	0.00	24.00
1567	2d AD	31-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1568	2d ID	31-Dec-44	A	0.00	0.00	2.40	0.00	24.00
1569	30th ID	31-Dec-44	A	0.00	0.00	25.10	0.00	24.00
1570	35th ID	31-Dec-44	A	0.00	0.00	15.80	999.90	999.90
1571	3d AD	31-Dec-44	A	19.80	0.00	7.50	0.00	24.00
1572	3d Army	31-Dec-44	A	3.10	3.10	184.20	999.90	999.90

ACSOB (SECTION 30 DEC 44 - 03 JAN 45)

PART 3 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1573	3d Cav Gp	31-Dec-44	A	0.00	0.00	18.00	0.00	24.00
1574	4th AD	31-Dec-44	A	0.00	0.00	21.70	999.90	999.90
1575	4th ID	31-Dec-44	A	0.00	0.00	36.60	0.00	24.00
1576	51st ID	31-Dec-44	B	0.00	0.00	0.00	0.00	24.00
1577	53d ID	31-Dec-44	B	0.00	0.00	17.10	0.00	24.00
1578	5th AD	31-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1579	5th ID	31-Dec-44	A	0.00	0.00	16.20	0.00	24.00
1580	6th AD	31-Dec-44	A	14.30	3.50	0.00	999.90	999.90
1581	6th AbnD	31-Dec-44	B	0.00	0.00	0.00	0.00	24.00
1582	75th ID	31-Dec-44	A	1.80	1.80	7.20	999.90	999.90
1583	78th ID	31-Dec-44	A	0.00	0.00	19.90	0.00	24.00
1584	7th AD	31-Dec-44	A	0.00	0.00	0.00	0.00	24.00
1585	80th ID	31-Dec-44	A	0.00	0.00	22.00	0.00	24.00
1586	82d AbnD	31-Dec-44	A	1.50	0.00	17.40	0.00	24.00
1587	83d ID	31-Dec-44	A	0.00	0.00	23.80	0.00	24.00
1588	84th ID	31-Dec-44	A	0.00	0.00	21.60	0.00	24.00
1589	87th ID	31-Dec-44	A	2.00	2.00	6.70	999.90	999.90
1590	8th ID	31-Dec-44	A	0.00	0.00	17.10	0.00	24.00
1591	90th ID	31-Dec-44	A	0.00	0.00	42.70	0.00	24.00
1592	99th ID	31-Dec-44	A	0.00	0.00	4.30	0.00	24.00
1593	9th AD	31-Dec-44	A	0.20	0.20	4.20	999.90	999.90
1594	9th Army	31-Dec-44	A	0.00	0.00	72.50	0.00	24.00
1595	9th ID	31-Dec-44	A	0.00	0.00	13.20	0.00	24.00
1596	III Corps	31-Dec-44	A	3.10	3.10	25.90	999.90	999.90
1597	V Corps	31-Dec-44	A	0.00	0.00	36.40	0.00	24.00
1598	VII Corps	31-Dec-44	A	0.00	0.00	49.80	999.90	999.90
1599	VIII Corps	31-Dec-44	A	2.90	2.90	42.70	999.90	999.90
1600	XII Corps	31-Dec-44	A	0.00	0.00	79.60	0.00	24.00
1601	XIII Corps	31-Dec-44	A	999.90	0.00	24.40	0.00	24.00
1602	XIX Corps	31-Dec-44	A	0.00	0.00	49.10	0.00	24.00
1603	XVIII Corps	31-Dec-44	A	1.80	1.80	41.90	0.00	24.00
1604	XX Corps	31-Dec-44	A	0.00	0.00	999.90	0.00	24.00
1605	XXX Corps	31-Dec-44	B	5.20	0.00	0.00	0.00	0.00
1606	10th SSPzD	31-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1607	118th PzD	31-Dec-44	G	0.00	0.00	8.50	0.00	24.00
1608	11th PzD	31-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1609	12th SSPzD	31-Dec-44	G	14.00	0.00	0.00	0.00	24.00
1610	12th VGD	31-Dec-44	G	15.50	0.00	0.00	0.00	24.00
1611	150th PzBde	31-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1612	15th Army	31-Dec-44	G	0.00	0.00	94.30	0.00	24.00
1613	15th PzGD	31-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1614	167th VGD	31-Dec-44	G	1.00	-1.00	5.00	999.90	999.90
1615	18th VGD	31-Dec-44	G	0.00	0.00	15.00	999.90	999.90
1616	1st SSPzD	31-Dec-44	G	1.00	-1.00	2.00	999.90	999.90
1617	212th VGD	31-Dec-44	G	0.00	0.00	35.00	0.00	24.00
1618	246th VGD	31-Dec-44	G	0.00	0.00	4.50	999.90	999.90
1619	26th VGD	31-Dec-44	G	0.50	-0.50	15.50	999.90	999.90
1620	272d VGD	31-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1621	276th VGD	31-Dec-44	G	0.00	0.00	10.50	0.00	24.00
1622	277th VGD	31-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1623	27th SSPzGD	31-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1624	28th SSPzGD	31-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1625	2d PzD	31-Dec-44	G	0.00	0.00	10.50	0.00	24.00
1626	2d SSPzD	31-Dec-44	G	0.00	0.00	4.00	0.00	24.00
1627	326th VGD	31-Dec-44	G	0.00	0.00	6.00	999.90	999.90
1628	340th VGD	31-Dec-44	G	17.00	0.00	0.00	0.00	24.00
1629	352d VGD	31-Dec-44	G	1.00	-1.00	15.50	0.00	24.00
1630	353d ID	31-Dec-44	G	0.00	0.00	9.50	999.90	999.90
1631	363d VGD	31-Dec-44	G	0.00	0.00	17.00	0.00	24.00
1632	3d FJO	31-Dec-44	G	0.00	0.00	10.00	999.90	999.90
1633	3d PzGD	31-Dec-44	G	1.50	-1.50	3.50	999.90	999.90
1634	47th VGD	31-Dec-44	G	0.00	0.00	9.50	0.00	24.00
1635	560th VGD	31-Dec-44	G	0.00	0.00	12.00	999.90	999.90
1636	59th ID	31-Dec-44	G	0.00	0.00	11.50	0.00	24.00

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1637	5th FJD	31-Dec-44	G	0.00	0.00	11.00	999.90	999.90
1638	5th PzArmy	31-Dec-44	G	4.00	-4.00	120.50	999.90	999.90
1639	82d VGD	31-Dec-44	G	0.00	0.00	7.00	999.90	999.90
1640	6th PzArmy	31-Dec-44	G	0.00	0.00	44.80	999.90	999.90
1641	79th VGD	31-Dec-44	G	0.00	0.00	8.00	0.00	24.00
1642	7th Army	31-Dec-44	G	1.40	-1.40	84.70	999.90	999.90
1643	85th ID	31-Dec-44	G	0.00	0.00	9.00	0.00	24.00
1644	89th ID	31-Dec-44	G	0.00	0.00	6.50	0.00	24.00
1645	9th PzD	31-Dec-44	G	0.00	0.00	12.50	999.90	999.90
1646	9th SSPzD	31-Dec-44	G	0.00	0.00	7.00	999.90	999.90
1647	9th VGD	31-Dec-44	G	0.00	0.00	14.50	999.90	999.90
1648	FBB	31-Dec-44	G	0.00	0.00	8.50	999.90	999.90
1649	FGB	31-Dec-44	G	1.00	0.00	14.50	999.90	999.90
1650	I SSPzK	31-Dec-44	G	16.00	0.00	7.00	999.90	999.90
1651	II SSPzK	31-Dec-44	G	0.00	0.00	16.00	999.90	999.90
1652	Korps Felber	31-Dec-44	G	0.00	0.00	11.50	999.90	999.90
1653	LIII K	31-Dec-44	G	1.00	-1.00	31.00	999.90	999.90
1654	LVIII PzK	31-Dec-44	G	0.00	0.00	34.10	999.90	999.90
1655	LXVI K	31-Dec-44	G	0.00	0.00	22.00	0.00	24.00
1656	LXVII K	31-Dec-44	G	0.00	0.00	27.40	0.00	24.00
1657	LXXIV K	31-Dec-44	G	0.00	0.00	32.00	0.00	24.00
1658	LXXX K	31-Dec-44	G	0.00	0.00	40.80	0.00	24.00
1659	LXXXI K	31-Dec-44	G	0.00	0.00	36.00	0.00	24.00
1660	LXXXV K	31-Dec-44	G	1.40	-1.40	24.50	999.90	999.90
1661	PzLehrD	31-Dec-44	G	2.50	-2.50	26.50	999.90	999.90
1662	XII SSK	31-Dec-44	G	0.00	0.00	0.00	0.00	24.00
1663	XLVII PzK	31-Dec-44	G	2.50	-2.50	56.00	999.90	999.90
1664	XXXIX PzK	31-Dec-44	G	1.00	-1.00	2.00	999.90	999.90
1665	101st AbnD	01-Jan-45	A	0.00	0.00	17.40	10.00	14.00
1666	102d ID	01-Jan-45	A	0.00	0.00	13.00	0.00	24.00
1667	104th ID	01-Jan-45	A	0.00	0.00	11.40	0.00	24.00
1668	106th ID	01-Jan-45	A	0.00	0.00	0.00	0.00	24.00
1669	11th AD	01-Jan-45	A	2.10	2.10	6.80	999.90	999.90
1670	17th AbnD	01-Jan-45	A	0.00	0.00	49.70	0.00	24.00
1671	1st Army	01-Jan-45	A	0.00	0.00	121.00	999.90	999.90
1672	1st ID	01-Jan-45	A	0.00	0.00	20.90	0.00	24.00
1673	26th ID	01-Jan-45	A	0.00	0.00	9.20	999.90	999.90
1674	28th ID	01-Jan-45	A	23.20	0.00	0.00	0.00	24.00
1675	29th Arm Bde	01-Jan-45	B	0.00	0.00	29.00	0.00	0.00
1676	29th ID	01-Jan-45	A	0.00	0.00	8.00	0.00	24.00
1677	2d AD	01-Jan-45	A	0.00	0.00	0.00	0.00	24.00
1678	2d ID	01-Jan-45	A	0.00	0.00	2.40	0.00	24.00
1679	30th ID	01-Jan-45	A	0.00	0.00	25.10	0.00	24.00
1680	35th ID	01-Jan-45	A	1.20	1.20	15.80	999.90	999.90
1681	3d AD	01-Jan-45	A	0.00	0.00	0.00	0.00	24.00
1682	3d Army	01-Jan-45	A	2.70	2.70	177.70	999.90	999.90
1683	3d Cav Gp	01-Jan-45	A	0.00	0.00	18.00	0.00	24.00
1684	4th AD	01-Jan-45	A	0.00	0.00	21.70	0.00	24.00
1685	4th ID	01-Jan-45	A	0.00	0.00	36.60	0.00	24.00
1686	51st ID	01-Jan-45	B	0.00	0.00	0.00	0.00	24.00
1687	53d ID	01-Jan-45	B	0.00	0.00	0.00	0.00	24.00
1688	5th AD	01-Jan-45	A	0.00	0.00	0.00	0.00	24.00
1689	5th ID	01-Jan-45	A	0.00	0.00	16.20	0.00	24.00
1690	6th AD	01-Jan-45	A	2.70	2.70	3.60	999.90	999.90
1691	6th AbnD	01-Jan-45	B	0.00	0.00	0.00	0.00	0.00
1692	75th ID	01-Jan-45	A	0.00	0.00	6.10	999.90	999.90
1693	78th ID	01-Jan-45	A	0.00	0.00	19.90	0.00	24.00
1694	7th AD	01-Jan-45	A	0.00	0.00	0.00	0.00	24.00
1695	80th ID	01-Jan-45	A	0.00	0.00	22.00	0.00	24.00
1696	82d AbnD	01-Jan-45	A	0.00	0.00	17.40	0.00	24.00
1697	83d ID	01-Jan-45	A	0.00	0.00	23.80	0.00	24.00
1698	84th ID	01-Jan-45	A	0.00	0.00	21.60	0.00	24.00
1699	87th ID	01-Jan-45	A	2.60	2.60	16.50	999.90	999.90
1700	8th ID	01-Jan-45	A	0.00	0.00	17.10	0.00	24.00

ACSD8 (SECTION 30 DEC 44 - 03 JAN 45)

PART 5 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1701	90th ID	01-Jan-45	A	0.00	0.00	42.70	0.00	24.00
1702	99th ID	01-Jan-45	A	0.00	0.00	4.30	0.00	24.00
1703	9th AD	01-Jan-45	A	1.20	1.20	4.40	999.90	999.90
1704	9th Army	01-Jan-45	A	0.00	0.00	72.50	999.90	24.00
1705	9th ID	01-Jan-45	A	0.00	0.00	13.20	999.90	999.90
1706	Guards AD	01-Jan-45	B	0.00	0.00	40.20	0.00	0.00
1707	III Corps	01-Jan-45	A	2.70	2.70	30.80	999.90	999.90
1708	V Corps	01-Jan-45	A	0.00	0.00	36.40	0.00	24.00
1709	VII Corps	01-Jan-45	A	0.00	0.00	49.80	999.90	999.90
1710	VIII Corps	01-Jan-45	A	2.20	2.20	43.00	999.90	999.90
1711	XII Corps	01-Jan-45	A	0.00	0.00	79.60	0.00	24.00
1712	XIII Corps	01-Jan-45	A	0.00	0.00	24.40	0.00	24.00
1713	XIX Corps	01-Jan-45	A	0.00	0.00	49.10	0.00	24.00
1714	XVIII Corps	01-Jan-45	A	0.00	0.00	41.60	0.00	24.00
1715	XX Corps	01-Jan-45	A	0.00	0.00	999.90	999.00	999.90
1716	XXX Corps	01-Jan-45	B	4.50	0.00	0.00	0.00	0.00
1717	10th SSPzD	01-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1718	116th PzD	01-Jan-45	G	0.00	0.00	8.50	0.00	24.00
1719	11th PzD	01-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1720	12th SSPzD	01-Jan-45	G	14.00	0.00	0.00	0.00	24.00
1721	12th VGD	01-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1722	150th PzBde	01-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1723	15th Army	01-Jan-45	G	0.00	0.00	94.30	0.00	24.00
1724	15th PzGD	01-Jan-45	G	1.00	0.00	0.00	0.00	24.00
1725	167th VGD	01-Jan-45	G	2.50	-2.50	4.50	999.90	999.90
1726	18th VGD	01-Jan-45	G	0.00	0.00	15.00	999.90	999.90
1727	1st SSPzD	01-Jan-45	G	0.00	0.00	2.00	999.90	999.90
1728	212th VGD	01-Jan-45	G	0.00	0.00	35.00	0.00	24.00
1729	246th VGD	01-Jan-45	G	0.00	0.00	4.50	999.90	999.90
1730	26th VGD	01-Jan-45	G	2.50	-2.50	15.50	999.90	999.90
1731	272d VGD	01-Jan-45	G	0.00	0.00	17.00	0.00	24.00
1732	276th VGD	01-Jan-45	G	0.00	0.00	10.50	0.00	24.00
1733	277th VGD	01-Jan-45	G	0.00	0.00	6.50	0.00	24.00
1734	27th SSPzGD	01-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1735	28th SSPzGD	01-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1736	2d PzD	01-Jan-45	G	0.00	0.00	10.50	0.00	24.00
1737	2d SSPzD	01-Jan-45	G	0.00	0.00	4.00	0.00	24.00
1738	326th VGD	01-Jan-45	G	0.00	0.00	6.00	999.90	999.90
1739	340th VGD	01-Jan-45	G	17.00	0.00	0.00	0.00	24.00
1740	352d VGD	01-Jan-45	G	0.00	0.00	10.00	0.00	24.00
1741	353d ID	01-Jan-45	G	0.00	0.00	9.50	999.90	999.90
1742	363d VGD	01-Jan-45	G	0.00	0.00	17.00	0.00	24.00
1743	3d FJD	01-Jan-45	G	0.00	0.00	10.00	999.90	999.90
1744	3d PzGD	01-Jan-45	G	1.50	-1.50	3.00	999.90	999.90
1745	47th VGD	01-Jan-45	G	0.00	0.00	9.50	0.00	24.00
1746	560th VGD	01-Jan-45	G	1.00	-1.00	13.80	999.90	999.90
1747	59th ID	01-Jan-45	G	0.00	0.00	11.50	999.90	999.90
1748	5th FJD	01-Jan-45	G	0.00	0.00	11.00	999.90	999.90
1749	5th PzArmy	01-Jan-45	G	1.00	-1.00	106.70	999.90	999.90
1750	62d VGD	01-Jan-45	G	0.00	0.00	7.00	999.90	999.90
1751	6th PzArmy	01-Jan-45	G	1.00	-1.00	44.80	999.90	999.90
1752	79th VGD	01-Jan-45	G	0.00	0.00	8.00	0.00	24.00
1753	7th Army	01-Jan-45	G	2.50	-2.50	83.60	999.90	999.90
1754	85th ID	01-Jan-45	G	0.00	0.00	9.00	0.00	24.00
1755	89th ID	01-Jan-45	G	0.00	0.00	6.50	0.00	24.00
1756	9th PzD	01-Jan-45	G	0.00	0.00	12.50	999.90	999.90
1757	9th SSPzD	01-Jan-45	G	20.50	0.00	7.00	999.90	999.90
1758	9th VGD	01-Jan-45	G	1.00	-1.00	14.50	999.90	999.90
1759	FBB	01-Jan-45	G	0.50	-0.50	8.50	999.90	999.90
1760	FGB	01-Jan-45	G	5.00	0.00	0.00	0.00	24.00
1761	I SSPzK	01-Jan-45	G	20.50	0.00	7.00	999.90	999.90
1762	II SSPzK	01-Jan-45	G	0.00	0.00	4.00	999.90	999.90
1763	Korps Felber	01-Jan-45	G	85.00	0.00	11.50	999.90	999.90
1764	LIII K	01-Jan-45	G	2.50	-2.50	30.60	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1765	LVIII PzK	01-Jan-45	G	0.00	0.00	34.10	999.90	999.90
1766	LXVI K	01-Jan-45	G	1.00	-1.00	35.80	999.90	999.90
1767	LXVII K	01-Jan-45	G	0.00	0.00	27.40	0.00	24.00
1768	LXXIV K	01-Jan-45	G	0.00	0.00	32.00	0.00	24.00
1769	LXXX K	01-Jan-45	G	0.00	0.00	40.80	0.00	24.00
1770	LXXXI K	01-Jan-45	G	0.00	0.00	36.00	0.00	24.00
1771	LXXXV K	01-Jan-45	G	0.00	0.00	21.60	0.00	24.00
1772	PzLehrD	01-Jan-45	G	0.00	0.00	28.00	999.90	999.90
1773	XII SSK	01-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1774	XLVII PzK	01-Jan-45	G	2.50	-2.50	52.00	999.90	999.90
1775	XXXIX PzK	01-Jan-45	G	0.00	0.00	2.00	999.90	999.90
1776	101st AbnD	02-Jan-45	A	1.00	-1.00	14.10	999.90	999.90
1777	102d ID	02-Jan-45	A	0.00	0.00	13.00	0.00	24.00
1778	104th ID	02-Jan-45	A	0.00	0.00	11.40	0.00	24.00
1779	106th ID	02-Jan-45	A	0.00	0.00	0.00	0.00	24.00
1780	11th AD	02-Jan-45	A	3.00	3.00	9.50	999.90	999.90
1781	17th AbnD	02-Jan-45	A	66.10	0.00	49.70	0.00	24.00
1782	1st Army	02-Jan-45	A	33.70	1.80	121.00	999.90	999.90
1783	1st ID	02-Jan-45	A	0.00	0.00	20.90	0.00	24.00
1784	26th ID	02-Jan-45	A	1.20	1.20	9.40	999.90	999.90
1785	28th ID	02-Jan-45	A	0.00	0.00	36.30	0.00	24.00
1786	29th Arm Bde	02-Jan-45	B	0.00	0.00	29.00	0.00	0.00
1787	29th ID	02-Jan-45	A	0.00	0.00	8.00	0.00	24.00
1788	2d AD	02-Jan-45	A	26.50	0.00	0.00	999.90	999.90
1789	2d ID	02-Jan-45	A	0.00	0.00	2.40	0.00	24.00
1790	30th ID	02-Jan-45	A	0.00	0.00	25.10	0.00	24.00
1791	35th ID	02-Jan-45	A	0.10	0.10	15.70	999.90	999.90
1792	3d AD	02-Jan-45	A	23.70	0.00	0.00	0.00	24.00
1793	3d Army	02-Jan-45	A	3.00	3.00	176.00	999.90	999.90
1794	3d Cav Gp	02-Jan-45	A	0.00	0.00	18.00	0.00	24.00
1795	4th AD	02-Jan-45	A	0.00	0.00	7.20	0.00	24.00
1796	4th ID	02-Jan-45	A	0.00	0.00	36.60	0.00	24.00
1797	5th ID	02-Jan-45	B	0.00	0.00	0.00	0.00	24.00
1798	53d ID	02-Jan-45	B	10.30	0.00	20.10	0.00	24.00
1799	5th AD	02-Jan-45	A	0.00	0.00	0.00	0.00	24.00
1800	5th ID	02-Jan-45	A	999.90	0.00	16.20	0.00	24.00
1801	6th AD	02-Jan-45	A	2.10	2.10	8.80	999.90	999.90
1802	6th AbnD	02-Jan-45	B	0.00	0.00	0.00	0.00	0.00
1803	75th ID	02-Jan-45	A	0.00	0.00	7.10	999.90	999.90
1804	78th ID	02-Jan-45	A	0.00	0.00	19.90	0.00	24.00
1805	7th AD	02-Jan-45	A	5.20	0.00	0.00	0.00	24.00
1806	80th ID	02-Jan-45	A	0.00	0.00	22.00	0.00	24.00
1807	82d AbnD	02-Jan-45	A	3.00	3.00	17.40	999.90	999.90
1808	83d ID	02-Jan-45	A	35.10	0.00	23.80	0.00	24.00
1809	84th ID	02-Jan-45	A	10.60	0.00	21.60	0.00	24.00
1810	87th ID	02-Jan-45	A	2.70	2.70	17.20	999.90	999.90
1811	8th ID	02-Jan-45	A	0.00	0.00	17.10	0.00	24.00
1812	90th ID	02-Jan-45	A	0.00	0.00	42.70	0.00	24.00
1813	99th ID	02-Jan-45	A	0.00	0.00	4.30	0.00	24.00
1814	9th AD	02-Jan-45	A	0.00	0.00	5.90	999.90	999.90
1815	9th Army	02-Jan-45	A	0.00	0.00	72.50	999.90	24.00
1816	9th ID	02-Jan-45	A	0.00	0.00	13.20	0.00	24.00
1817	III Corps	02-Jan-45	A	3.00	3.00	26.50	999.90	999.90
1818	V Corps	02-Jan-45	A	0.00	0.00	36.40	0.00	24.00
1819	VII Corps	02-Jan-45	A	33.70	0.00	49.80	0.00	24.00
1820	VIII Corps	02-Jan-45	A	1.50	1.50	50.80	999.90	999.90
1821	XII Corps	02-Jan-45	A	0.00	0.00	79.60	0.00	24.00
1822	XIII Corps	02-Jan-45	A	0.00	0.00	24.40	0.00	24.00
1823	XIX Corps	02-Jan-45	A	0.00	0.00	49.10	0.00	24.00
1824	XVIII Corps	02-Jan-45	A	1.80	1.80	31.70	999.90	999.90
1825	XX Corps	02-Jan-45	A	0.80	0.80	999.90	999.90	999.90
1826	XXX Corps	02-Jan-45	B	4.60	0.00	0.00	0.00	0.00
1827	10th SSPzD	02-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1828	118th PzD	02-Jan-45	G	0.00	0.00	8.50	0.00	24.00

ACSDb (SECTION 30 DEC 44 - 03 JAN 45)

PART 7 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1829	11th PzD	02-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1830	12th SSPzD	02-Jan-45	G	2.50	2.50	0.00	999.90	999.90
1831	12th VGD	02-Jan-45	G	0.00	0.00	9.50	0.00	24.00
1832	150th PzBde	02-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1833	15th Army	02-Jan-45	G	0.00	0.00	94.30	0.00	24.00
1834	15th PzGD	02-Jan-45	G	1.50	-1.50	3.50	999.90	999.90
1835	167th VGD	02-Jan-45	G	1.50	1.50	7.00	999.90	999.90
1836	18th VGD	02-Jan-45	G	0.00	0.00	15.00	999.90	999.90
1837	1st SSPzD	02-Jan-45	G	0.00	0.00	2.00	999.90	999.90
1838	212th VGD	02-Jan-45	G	0.00	0.00	35.00	0.00	24.00
1839	246th VGD	02-Jan-45	G	0.00	0.00	4.50	999.90	999.90
1840	26th VGD	02-Jan-45	G	0.00	0.00	13.50	999.90	999.90
1841	272d VGD	02-Jan-45	G	0.00	0.00	17.00	0.00	24.00
1842	276th VGD	02-Jan-45	G	0.00	0.00	10.50	0.00	24.00
1843	277th VGD	02-Jan-45	G	0.00	0.00	6.50	0.00	24.00
1844	27th SSPzGD	02-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1845	28th SSPzGD	02-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1846	2d PzD	02-Jan-45	G	0.00	0.00	10.50	0.00	24.00
1847	2d SSPzD	02-Jan-45	G	1.00	-1.00	4.00	0.00	24.00
1848	326th VGD	02-Jan-45	G	0.00	0.00	6.00	999.90	999.90
1849	340th VGD	02-Jan-45	G	17.00	0.00	0.00	999.90	999.90
1850	352d VGD	02-Jan-45	G	0.00	0.00	10.00	0.00	24.00
1851	353d ID	02-Jan-45	G	0.00	0.00	9.50	999.90	999.90
1852	363d VGD	02-Jan-45	G	0.00	0.00	17.00	0.00	24.00
1853	3d FJD	02-Jan-45	G	0.00	0.00	10.00	999.90	999.90
1854	3d PzGD	02-Jan-45	G	2.00	-2.00	4.50	999.90	999.90
1855	47th VGD	02-Jan-45	G	0.00	0.00	9.50	0.00	24.00
1856	560th VGD	02-Jan-45	G	1.00	-1.00	9.00	999.90	999.90
1857	59th ID	02-Jan-45	G	0.00	0.00	11.50	0.00	24.00
1858	5th FJD	02-Jan-45	G	11.00	0.00	0.00	999.90	999.90
1859	5th PzArmy	02-Jan-45	G	2.20	-2.20	85.10	999.90	999.90
1860	62d VGD	02-Jan-45	G	0.00	0.00	7.00	999.90	999.90
1861	6th PzArmy	02-Jan-45	G	1.00	-1.00	45.50	999.90	999.90
1862	79th VGD	02-Jan-45	G	0.00	0.00	8.00	0.00	24.00
1863	7th Army	02-Jan-45	G	1.50	-1.50	75.70	999.90	999.90
1864	85th ID	02-Jan-45	G	0.00	0.00	9.00	0.00	24.00
1865	89th ID	02-Jan-45	G	0.00	0.00	6.50	0.00	24.00
1866	9th PzD	02-Jan-45	G	0.00	0.00	12.50	999.90	999.90
1867	9th SSPzD	02-Jan-45	G	11.00	0.00	0.00	999.90	999.90
1868	9th VGD	02-Jan-45	G	1.00	-1.00	15.00	999.90	999.90
1869	FBB	02-Jan-45	G	0.50	-0.50	8.00	999.90	999.90
1870	FGB	02-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1871	I SSPzK	02-Jan-45	G	2.50	2.50	13.50	999.90	999.90
1872	II SSPzK	02-Jan-45	G	1.00	-1.00	4.00	999.90	999.90
1873	Korps Felber	02-Jan-45	G	0.00	0.00	22.00	999.90	999.90
1874	LIII K	02-Jan-45	G	1.50	1.50	22.00	999.90	999.90
1875	LVIII PzK	02-Jan-45	G	0.00	0.00	34.10	999.90	999.90
1876	LXVI K	02-Jan-45	G	1.00	-1.00	18.50	999.90	999.90
1877	LXVII K	02-Jan-45	G	0.00	0.00	27.40	0.00	24.00
1878	LXXIV K	02-Jan-45	G	0.00	0.00	32.00	0.00	24.00
1879	LXXX K	02-Jan-45	G	0.00	0.00	40.80	0.00	24.00
1880	LXXXI K	02-Jan-45	G	0.00	0.00	36.00	0.00	24.00
1881	LXXXV K	02-Jan-45	G	0.00	0.00	21.60	0.00	24.00
1882	PzLehrD	02-Jan-45	G	0.00	0.00	28.00	999.90	999.90
1883	XII SSK	02-Jan-45	G	0.00	0.00	11.50	0.00	24.00
1884	XLVII PzK	02-Jan-45	G	2.00	-2.00	41.00	999.90	999.90
1885	XXXIX PzK	02-Jan-45	G	1.50	1.50	7.10	999.90	999.90
1886	101st AbnD	03-Jan-45	A	0.00	0.00	14.10	999.90	999.90
1887	102d ID	03-Jan-45	A	0.00	0.00	13.00	0.00	24.00
1888	104th ID	03-Jan-45	A	0.00	0.00	11.40	0.00	24.00
1889	106th ID	03-Jan-45	A	0.00	0.00	0.00	0.00	24.00
1890	11th AD	03-Jan-45	A	10.50	10.50	12.70	0.00	24.00
1891	17th AbnD	03-Jan-45	A	16.60	0.00	0.00	0.00	24.00
1892	1st Army	03-Jan-45	A	4.40	4.40	84.30	999.90	999.90

ACSDB (SECTION 30 DEC 44 - 03 JAN 45)

PART 8 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1893	1st ID	03-Jan-45	A	0.00	0.00	20.90	0.00	24.00
1894	28th ID	03-Jan-45	A	1.20	1.20	11.50	999.90	999.90
1895	28th ID	03-Jan-45	A	0.00	0.00	36.30	0.00	24.00
1896	29th Arm Bde	03-Jan-45	B	0.90	0.90	29.00	14.00	10.00
1897	29th ID	03-Jan-45	A	0.00	0.00	8.00	0.00	24.00
1898	2d AD	03-Jan-45	A	6.90	6.90	0.00	999.90	999.90
1899	2d ID	03-Jan-45	A	0.00	0.00	2.40	0.00	24.00
1900	30th ID	03-Jan-45	A	1.80	1.80	25.10	999.90	999.90
1901	35th ID	03-Jan-45	A	0.00	0.00	15.20	999.90	999.90
1902	3d AD	03-Jan-45	A	9.40	9.40	0.00	999.90	999.90
1903	3d Army	03-Jan-45	A	1.70	1.70	174.80	999.90	999.90
1904	3d Cav Gp	03-Jan-45	A	0.00	0.00	18.00	0.00	24.00
1905	4th AD	03-Jan-45	A	0.00	0.00	7.20	0.00	24.00
1906	4th ID	03-Jan-45	A	0.00	0.00	36.60	0.00	24.00
1907	51st ID	03-Jan-45	B	0.00	0.00	0.00	0.00	24.00
1908	53d ID	03-Jan-45	B	6.00	0.00	34.80	0.00	24.00
1909	5th AD	03-Jan-45	A	0.00	0.00	0.00	0.00	24.00
1910	5th ID	03-Jan-45	A	0.00	0.00	16.20	0.00	24.00
1911	6th AD	03-Jan-45	A	0.00	0.00	8.50	999.90	999.90
1912	6th AbnD	03-Jan-45	B	0.00	0.00	27.10	999.90	999.90
1913	75th ID	03-Jan-45	A	0.00	0.00	18.60	0.00	24.00
1914	78th ID	03-Jan-45	A	0.00	0.00	19.90	0.00	24.00
1915	7th AD	03-Jan-45	A	0.00	0.00	0.00	0.00	24.00
1916	80th ID	03-Jan-45	A	0.00	0.00	22.00	0.00	24.00
1917	82d AbnD	03-Jan-45	A	3.10	3.10	15.40	999.90	999.90
1918	83d ID	03-Jan-45	A	11.80	11.80	17.90	999.90	999.90
1919	84th ID	03-Jan-45	A	2.10	2.10	0.00	999.90	999.90
1920	87th ID	03-Jan-45	A	1.70	1.70	20.40	999.90	999.90
1921	8th ID	03-Jan-45	A	0.00	0.00	17.10	0.00	24.00
1922	90th ID	03-Jan-45	A	0.00	0.00	42.70	0.00	24.00
1923	99th ID	03-Jan-45	A	0.00	0.00	4.30	999.90	999.90
1924	9th AD	03-Jan-45	A	1.00	1.00	5.90	999.90	999.90
1925	9th Army	03-Jan-45	A	0.00	0.00	72.50	999.90	24.00
1926	9th ID	03-Jan-45	A	0.00	0.00	13.20	999.90	999.90
1927	Guards AD	03-Jan-45	B	0.00	0.00	0.00	0.00	24.00
1928	III Corps	03-Jan-45	A	1.70	1.70	28.70	999.90	999.90
1929	V Corps	03-Jan-45	A	0.00	0.00	36.40	0.00	24.00
1930	VII Corps	03-Jan-45	A	4.40	4.40	21.70	999.90	999.90
1931	VIII Corps	03-Jan-45	A	1.50	1.50	37.10	999.90	999.90
1932	XII Corps	03-Jan-45	A	0.00	0.00	79.60	0.00	24.00
1933	XIII Corps	03-Jan-45	A	0.00	0.00	24.40	0.00	24.00
1934	XIX Corps	03-Jan-45	A	0.00	0.00	49.10	0.00	24.00
1935	XVIII Corps	03-Jan-45	A	3.10	3.10	32.30	999.90	999.90
1936	XX Corps	03-Jan-45	A	0.00	0.00	999.90	0.00	24.00
1937	XXX Corps	03-Jan-45	B	5.80	0.00	47.40	0.00	0.00
1938	10th SSPzD	03-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1939	116th PzD	03-Jan-45	G	0.00	0.00	8.50	0.00	24.00
1940	11th PzD	03-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1941	12th SSPzD	03-Jan-45	G	0.00	0.00	1.00	0.00	24.00
1942	12th VGD	03-Jan-45	G	2.00	-2.00	9.50	999.90	999.90
1943	15th Army	03-Jan-45	G	0.00	0.00	94.30	0.00	24.00
1944	15th PzGD	03-Jan-45	G	0.00	0.00	2.00	999.90	999.90
1945	167th VGD	03-Jan-45	G	0.00	0.00	4.50	999.90	999.90
1946	18th VGD	03-Jan-45	G	0.00	0.00	15.00	999.90	999.90
1947	1st SSPzD	03-Jan-45	G	1.00	-1.00	1.00	999.90	999.90
1948	212th VGD	03-Jan-45	G	0.00	0.00	35.00	0.00	24.00
1949	246th VGD	03-Jan-45	G	8.00	0.00	4.50	999.90	999.90
1950	26th VGD	03-Jan-45	G	1.00	-1.00	13.50	999.90	999.90
1951	272d VGD	03-Jan-45	G	0.00	0.00	17.00	0.00	24.00
1952	276th VGD	03-Jan-45	G	27.00	0.00	10.50	0.00	24.00
1953	277th VGD	03-Jan-45	G	0.00	0.00	5.50	0.00	24.00
1954	27th SSPzGD	03-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1955	28th SSPzGD	03-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1956	2d PzD	03-Jan-45	G	0.00	0.00	10.50	0.00	24.00

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PART 9 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1957	2d SSPzD	03-Jan-45	G	0.00	0.00	5.00	999.90	999.90
1958	326th VGD	03-Jan-45	G	19.00	0.00	6.00	0.00	24.00
1959	340th VGD	03-Jan-45	G	1.00	0.00	0.00	999.90	999.90
1960	352d VGD	03-Jan-45	G	0.00	0.00	10.00	0.00	24.00
1961	353d ID	03-Jan-45	G	0.00	0.00	9.50	999.90	999.90
1962	363d VGD	03-Jan-45	G	0.00	0.00	17.00	0.00	24.00
1963	3d FJD	03-Jan-45	G	0.00	0.00	10.00	999.90	999.90
1964	3d PzGD	03-Jan-45	G	0.00	0.00	3.00	999.90	999.90
1965	47th VGD	03-Jan-45	G	46.00	0.00	9.50	0.00	24.00
1966	560th VGD	03-Jan-45	G	0.00	0.00	7.00	999.90	999.90
1967	59th ID	03-Jan-45	G	0.00	0.00	11.50	0.00	24.00
1968	5th FJD	03-Jan-45	G	0.00	0.00	10.00	999.90	999.90
1969	5th PzArmy	03-Jan-45	G	2.20	-2.20	72.90	999.90	999.90
1970	62d VGD	03-Jan-45	G	2.00	-2.00	7.00	999.90	999.90
1971	6th PzArmy	03-Jan-45	G	2.00	-2.00	54.70	999.90	999.90
1972	79th VGD	03-Jan-45	G	0.00	0.00	8.00	999.90	999.90
1973	7th Army	03-Jan-45	G	0.00	0.00	87.10	999.90	999.90
1974	85th ID	03-Jan-45	G	0.00	0.00	9.00	0.00	24.00
1975	89th ID	03-Jan-45	G	0.00	0.00	6.50	0.00	24.00
1976	9th PzD	03-Jan-45	G	0.00	0.00	12.50	999.90	999.90
1977	9th SSPzD	03-Jan-45	G	0.00	0.00	7.00	999.90	999.90
1978	9th VGD	03-Jan-45	G	0.00	0.00	16.00	999.90	999.90
1979	FBB	03-Jan-45	G	0.00	0.00	7.50	999.90	999.90
1980	FGB	03-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1981	I SSPzK	03-Jan-45	G	1.00	-1.00	15.50	999.90	999.90
1982	II SSPzK	03-Jan-45	G	0.00	0.00	13.80	999.90	999.90
1983	Korps Felber	03-Jan-45	G	2.00	-2.00	22.00	999.90	999.90
1984	LIII K	03-Jan-45	G	27.00	0.00	36.10	999.90	999.90
1985	LVIII PzK	03-Jan-45	G	0.00	0.00	24.40	999.90	999.90
1986	LXVI K	03-Jan-45	G	2.00	-2.00	17.40	999.90	999.90
1987	LXVII K	03-Jan-45	G	0.00	0.00	27.40	0.00	24.00
1988	LXXIV K	03-Jan-45	G	0.00	0.00	0.00	0.00	24.00
1989	LXXX K	03-Jan-45	G	0.00	0.00	32.90	0.00	24.00
1990	LXXXI K	03-Jan-45	G	0.00	0.00	36.00	0.00	24.00
1991	LXXXV K	03-Jan-45	G	0.00	0.00	21.60	999.90	999.90
1992	PzLehrD	03-Jan-45	G	0.00	0.00	28.00	999.90	999.90
1993	XII SSK	03-Jan-45	G	0.00	0.00	11.50	0.00	24.00
1994	XLVII PzK	03-Jan-45	G	0.00	0.00	42.00	999.90	999.90
1995	XXXIX PzK	03-Jan-45	G	0.00	0.00	4.50	0.00	24.00

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
1996	101st AbnD	04-Jan-45	A	1.40	1.40	14.10	999.90	999.90
1997	102d ID	04-Jan-45	A	0.00	0.00	13.00	0.00	24.00
1998	104th ID	04-Jan-45	A	0.00	0.00	11.40	0.00	24.00
1999	106th ID	04-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2000	11th AD	04-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2001	17th AbnD	04-Jan-45	A	1.80	-1.80	11.20	999.90	999.90
2002	1st Army	04-Jan-45	A	3.60	3.60	80.70	999.90	999.90
2003	1st ID	04-Jan-45	A	0.00	0.00	20.90	0.00	24.00
2004	26th ID	04-Jan-45	A	0.50	0.50	9.80	0.00	24.00
2005	28th ID	04-Jan-45	A	0.00	0.00	36.30	0.00	24.00
2006	29th Arm Bde	04-Jan-45	B	1.00	1.00	28.00	20.50	4.50
2007	29th ID	04-Jan-45	A	0.00	0.00	8.00	0.00	24.00
2008	2d AD	04-Jan-45	A	1.10	1.10	14.40	999.90	999.90
2009	2d ID	04-Jan-45	A	0.00	0.00	2.40	0.00	24.00
2010	30th ID	04-Jan-45	A	0.00	0.00	22.00	0.00	24.00
2011	35th ID	04-Jan-45	A	0.00	0.00	15.20	999.90	999.90
2012	3d AD	04-Jan-45	A	1.40	1.40	7.80	999.90	999.90
2013	3d Army	04-Jan-45	A	3.50	-3.50	175.60	999.90	999.90
2014	3d Cav Gp	04-Jan-45	A	0.00	0.00	18.00	0.00	24.00
2015	4th AD	04-Jan-45	A	0.00	0.00	7.20	0.00	249.90
2016	4th ID	04-Jan-45	A	0.00	0.00	36.60	0.00	24.00
2017	51st ID	04-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2018	53d ID	04-Jan-45	B	0.00	0.00	17.70	0.00	0.00
2019	5th AD	04-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2020	5th ID	04-Jan-45	A	0.00	0.00	16.20	0.00	24.00
2021	6th AD	04-Jan-45	A	1.10	-1.10	13.50	999.90	999.90
2022	6th AbnD	04-Jan-45	B	0.00	0.00	0.00	0.00	0.00
2023	75th ID	04-Jan-45	A	0.00	0.00	18.60	999.90	999.90
2024	78th ID	04-Jan-45	A	4.30	4.30	19.90	999.90	999.90
2025	7th AD	04-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2026	80th ID	04-Jan-45	A	0.00	0.00	22.00	0.00	24.00
2027	82d AbnD	04-Jan-45	A	2.30	2.30	11.10	999.90	999.90
2028	83d ID	04-Jan-45	A	0.00	0.00	17.40	0.00	24.00
2029	84th ID	04-Jan-45	A	0.70	0.70	4.70	3.00	21.00
2030	87th ID	04-Jan-45	A	0.00	0.00	18.80	999.90	999.90
2031	8th ID	04-Jan-45	A	0.00	0.00	17.10	0.00	24.00
2032	90th ID	04-Jan-45	A	0.00	0.00	42.70	0.00	24.00
2033	99th ID	04-Jan-45	A	0.00	0.00	4.30	0.00	24.00
2034	9th AD	04-Jan-45	A	83.90	0.00	6.30	0.00	24.00
2035	9th Army	04-Jan-45	A	4.30	4.30	72.50	999.90	999.90
2036	9th ID	04-Jan-45	A	0.00	0.00	13.20	0.00	24.00
2037	Guards AD	04-Jan-45	B	0.00	0.00	0.00	0.00	0.00
2038	III Corps	04-Jan-45	A	3.40	-3.40	29.40	999.90	999.90
2039	V Corps	04-Jan-45	A	0.00	0.00	36.40	0.00	24.00
2040	VII Corps	04-Jan-45	A	3.60	3.60	32.70	999.90	999.90
2041	VIII Corps	04-Jan-45	A	3.60	-3.60	39.00	999.90	999.90
2042	XII Corps	04-Jan-45	A	0.00	0.00	79.60	0.00	24.00
2043	XIII Corps	04-Jan-45	A	0.00	0.00	24.40	0.00	24.00
2044	XIX Corps	04-Jan-45	A	4.30	4.30	49.10	999.90	999.90
2045	XVIII Corps	04-Jan-45	A	2.30	2.30	34.00	999.90	999.90
2046	XX Corps	04-Jan-45	A	999.90	0.00	999.90	999.90	999.90
2047	XXX Corps	04-Jan-45	B	0.60	0.00	0.00	0.00	0.00
2048	10th SSPzD	04-Jan-45	G	145.00	0.00	0.00	0.00	24.00
2049	116th PzD	04-Jan-45	G	0.00	0.00	8.50	0.00	24.00
2050	11th PzD	04-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2051	12th SSPzD	04-Jan-45	G	1.50	1.50	1.00	999.90	999.90
2052	12th VGD	04-Jan-45	G	1.50	-1.50	7.80	999.90	999.90
2053	15th Army	04-Jan-45	G	0.00	0.00	94.30	0.00	24.00
2054	15th PzGD	04-Jan-45	G	0.00	0.00	2.00	999.90	999.90
2055	187th VGD	04-Jan-45	G	0.00	0.00	4.50	999.90	999.90
2056	18th VGD	04-Jan-45	G	0.00	0.00	15.00	999.90	999.90
2057	1st SSPzD	04-Jan-45	G	0.00	0.00	4.00	999.90	999.90
2058	212th VGD	04-Jan-45	G	0.00	0.00	35.00	0.00	24.00
2059	246th VGD	04-Jan-45	G	0.00	0.00	6.00	999.90	999.90
2060	28th VGD	04-Jan-45	G	0.00	0.00	6.50	999.90	999.90

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SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2081	272d VGD	04-Jan-45	G	0.00	0.00	17.00	0.00	24.00
2082	276th VGD	04-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2083	277th VGD	04-Jan-45	G	0.00	0.00	10.00	0.00	24.00
2084	27th SSPzGD	04-Jan-45	G	32.50	0.00	0.00	0.00	24.00
2085	28th SSPzGD	04-Jan-45	G	30.00	0.00	0.00	0.00	24.00
2086	2d PzD	04-Jan-45	G	0.00	0.00	10.50	0.00	24.00
2087	2d SSPzD	04-Jan-45	G	1.50	-1.50	5.00	999.90	999.90
2088	326th VGD	04-Jan-45	G	42.00	0.00	0.00	0.00	24.00
2089	340th VGD	04-Jan-45	G	0.00	0.00	2.00	999.90	999.90
2070	352d VGD	04-Jan-45	G	0.00	0.00	10.00	0.00	24.00
2071	353d ID	04-Jan-45	G	0.00	0.00	9.50	999.90	999.90
2072	383d VGD	04-Jan-45	G	0.00	0.00	25.00	0.00	24.00
2073	3d FJD	04-Jan-45	G	0.00	0.00	10.00	999.90	999.90
2074	3d PzGD	04-Jan-45	G	0.00	0.00	3.00	999.90	999.90
2075	47th VGD	04-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2076	560th VGD	04-Jan-45	G	2.00	-2.00	7.00	999.90	999.90
2077	59th ID	04-Jan-45	G	0.00	0.00	11.50	0.00	24.00
2078	5th FJD	04-Jan-45	G	0.00	0.00	10.00	999.90	999.90
2079	5th PzArmy	04-Jan-45	G	0.70	-0.70	86.50	999.90	999.90
2080	62d VGD	04-Jan-45	G	0.50	-0.50	8.50	999.90	999.90
2081	6th PzArmy	04-Jan-45	G	2.00	-2.00	54.50	999.90	999.90
2082	79th VGD	04-Jan-45	G	0.00	0.00	8.00	0.00	24.00
2083	7th Army	04-Jan-45	G	0.00	0.00	87.10	999.90	999.90
2084	85th ID	04-Jan-45	G	0.00	0.00	9.00	0.00	24.00
2085	89th ID	04-Jan-45	G	0.00	0.00	6.50	0.00	24.00
2086	9th PzD	04-Jan-45	G	0.00	0.00	12.50	999.90	999.90
2087	9th SSPzD	04-Jan-45	G	0.00	0.00	7.00	999.90	999.90
2088	9th VGD	04-Jan-45	G	0.00	0.00	16.00	999.90	999.90
2089	FBB	04-Jan-45	G	0.00	0.00	7.50	999.90	999.90
2090	FGB	04-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2091	I SSPzK	04-Jan-45	G	1.50	1.50	15.00	999.90	999.90
2092	II SSPzK	04-Jan-45	G	1.50	-1.50	13.80	999.90	999.90
2093	Korps Felber	04-Jan-45	G	0.50	-0.50	23.50	999.90	999.90
2094	LIII K	04-Jan-45	G	0.00	0.00	35.80	0.00	24.00
2095	LVIII PzK	04-Jan-45	G	0.00	0.00	24.40	999.90	999.90
2096	LXVI K	04-Jan-45	G	2.00	-2.00	15.00	999.90	999.90
2097	LXVII K	04-Jan-45	G	0.00	0.00	27.40	0.00	24.00
2098	LXXIV K	04-Jan-45	G	0.00	0.00	32.00	0.00	24.00
2099	LXXX K	04-Jan-45	G	0.00	0.00	32.90	0.00	24.00
2100	LXXXI K	04-Jan-45	G	0.00	0.00	36.00	0.00	24.00
2101	LXXXV K	04-Jan-45	G	0.00	0.00	21.60	0.00	24.00
2102	PzLehrD	04-Jan-45	G	0.00	0.00	28.50	999.90	999.90
2103	XII SSK	04-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2104	XLVII PzK	04-Jan-45	G	0.00	0.00	40.00	999.90	999.90
2105	XXXIX PzK	04-Jan-45	G	0.00	0.00	4.50	0.00	24.00
2106	101st AbnD	05-Jan-45	A	0.00	0.00	15.10	0.00	24.00
2107	102d ID	05-Jan-45	A	0.00	0.00	13.00	0.00	24.00
2108	104th ID	05-Jan-45	A	0.00	0.00	11.40	0.00	24.00
2109	106th ID	05-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2110	11th AD	05-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2111	17th AbnD	05-Jan-45	A	0.60	-0.60	11.20	999.90	999.90
2112	1st Army	05-Jan-45	A	5.50	5.50	81.70	999.90	999.90
2113	1st ID	05-Jan-45	A	0.00	0.00	20.90	0.00	24.00
2114	28th ID	05-Jan-45	A	0.00	0.00	9.50	0.00	24.00
2115	28th ID	05-Jan-45	A	0.00	0.00	36.30	0.00	24.00
2116	29th Arm Bde	05-Jan-45	B	1.00	-1.00	28.00	16.00	8.00
2117	29th ID	05-Jan-45	A	0.00	0.00	8.00	0.00	24.00
2118	2d AD	05-Jan-45	A	1.80	1.80	14.40	999.90	999.90
2119	2d ID	05-Jan-45	A	0.00	0.00	2.40	0.00	24.00
2120	30th ID	05-Jan-45	A	0.00	0.00	22.00	999.90	999.90
2121	35th ID	05-Jan-45	A	0.00	0.00	15.10	999.90	999.90
2122	3d AD	05-Jan-45	A	0.90	0.90	6.90	999.90	999.90
2123	3d Army	05-Jan-45	A	1.80	1.80	177.60	999.90	999.90
2124	3d Cav Gp	05-Jan-45	A	0.00	0.00	18.00	0.00	24.00

ACSDB (SECTION 04-08 JAN 45)

PART 3 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE		TIME IN COMBAT	TIME NO COMBAT
					OPPOSED	FRONT		
					ADVANCE	WIDTH		
2125	4th AD	05-Jan-45	A	0.00	0.00	6.70	999.90	999.90
2126	4th ID	05-Jan-45	A	0.00	0.00	36.60	0.00	24.00
2127	51st ID	05-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2128	53d ID	05-Jan-45	B	9.50	9.50	17.70	0.00	0.00
2129	5th AD	05-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2130	5th ID	05-Jan-45	A	0.00	0.00	16.20	0.00	24.00
2131	6th AD	05-Jan-45	A	2.30	-2.30	13.80	999.90	999.90
2132	6th AbnD	05-Jan-45	B	0.00	0.00	0.00	0.00	0.00
2133	75th ID	05-Jan-45	A	1.40	1.40	20.80	999.90	999.90
2134	78th ID	05-Jan-45	A	0.00	0.00	14.60	999.90	999.90
2135	7th AD	05-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2136	80th ID	05-Jan-45	A	11.70	0.00	22.00	0.00	24.00
2137	82d AbnD	05-Jan-45	A	1.80	1.80	17.50	999.90	999.90
2138	83d ID	05-Jan-45	A	0.00	0.00	21.90	0.00	24.00
2139	84th ID	05-Jan-45	A	0.00	0.00	16.40	999.90	999.90
2140	87th ID	05-Jan-45	A	0.00	0.00	18.80	999.90	999.90
2141	8th ID	05-Jan-45	A	0.00	0.00	17.10	0.00	24.00
2142	90th ID	05-Jan-45	A	0.00	0.00	42.70	0.00	24.00
2143	99th ID	05-Jan-45	A	0.00	0.00	4.30	0.00	24.00
2144	9th AD	05-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2145	9th Army	05-Jan-45	A	0.00	0.00	69.10	999.90	24.00
2146	9th ID	05-Jan-45	A	0.00	0.00	13.20	0.00	24.00
2147	III Corps	05-Jan-45	A	0.00	0.00	28.40	999.90	999.90
2148	V Corps	05-Jan-45	A	0.00	0.00	36.40	0.00	24.00
2149	VII Corps	05-Jan-45	A	5.50	5.50	34.40	999.90	999.90
2150	VIII Corps	05-Jan-45	A	1.80	1.80	41.70	999.90	999.90
2151	XII Corps	05-Jan-45	A	0.00	0.00	79.60	0.00	24.00
2152	XIII Corps	05-Jan-45	A	0.00	0.00	24.00	0.00	24.00
2153	XIX Corps	05-Jan-45	A	0.00	0.00	46.60	0.00	24.00
2154	XVIII Corps	05-Jan-45	A	1.80	1.80	36.30	999.90	999.90
2155	XX Corps	05-Jan-45	A	999.90	0.00	999.90	0.00	24.00
2156	XXX Corps	05-Jan-45	B	2.40	0.00	999.90	999.90	999.90
2157	10th SSPzD	05-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2158	116th PzD	05-Jan-45	G	0.00	0.00	8.50	0.00	24.00
2159	11th PzD	05-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2160	12th SSPzD	05-Jan-45	G	1.00	1.00	2.50	999.90	999.90
2161	12th VGD	05-Jan-45	G	1.50	-1.50	9.00	999.90	999.90
2162	15th Army	05-Jan-45	G	0.00	0.00	94.30	0.00	24.00
2163	15th PzGD	05-Jan-45	G	0.00	0.00	2.00	0.00	0.00
2164	167th VGD	05-Jan-45	G	0.00	0.00	4.50	999.90	999.90
2165	18th VGD	05-Jan-45	G	0.00	0.00	15.00	999.90	999.90
2166	1st SSPzD	05-Jan-45	G	0.00	0.00	4.00	999.90	999.90
2167	212th VGD	05-Jan-45	G	0.00	0.00	35.00	0.00	24.00
2168	246th VGD	05-Jan-45	G	0.00	0.00	6.00	999.90	999.90
2169	26th VGD	05-Jan-45	G	0.00	0.00	6.50	999.90	999.90
2170	272d VGD	05-Jan-45	G	0.00	0.00	17.00	0.00	24.00
2171	276th VGD	05-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2172	277th VGD	05-Jan-45	G	0.00	0.00	10.00	0.00	24.00
2173	27th SSPzGD	05-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2174	28th SSPzGD	05-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2175	2d PzD	05-Jan-45	G	0.00	0.00	10.50	0.00	24.00
2176	2d SSPzD	05-Jan-45	G	0.00	0.00	7.00	999.90	999.90
2177	326th VGD	05-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2178	340th VGD	05-Jan-45	G	2.50	2.50	2.00	999.90	999.90
2179	352d VGD	05-Jan-45	G	0.00	0.00	10.00	0.00	24.00
2180	353d ID	05-Jan-45	G	0.00	0.00	9.50	999.90	999.90
2181	363d VGD	05-Jan-45	G	0.00	0.00	25.00	0.00	24.00
2182	3d FJD	05-Jan-45	G	0.00	0.00	10.00	999.90	999.90
2183	3d PzGD	05-Jan-45	G	0.00	0.00	3.00	0.00	24.00
2184	560th VGD	05-Jan-45	G	0.00	0.00	8.00	999.90	999.90
2185	59th ID	05-Jan-45	G	0.00	0.00	11.50	0.00	24.00
2186	5th FJD	05-Jan-45	G	0.00	0.00	10.00	999.90	999.90
2187	5th PzArmy	05-Jan-45	G	3.40	-3.40	86.50	999.90	999.90
2188	62d VGD	05-Jan-45	G	1.50	-1.50	9.00	999.90	999.90

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PART 4 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2189	8th PzArmy	05-Jan-45	G	1.50	-1.50	56.50	999.90	999.90
2190	79th VGD	05-Jan-45	G	0.00	0.00	8.00	0.00	24.00
2191	7th Army	05-Jan-45	G	0.00	0.00	87.10	999.90	999.90
2192	85th ID	05-Jan-45	G	0.00	0.00	9.00	0.00	24.00
2193	89th ID	05-Jan-45	G	0.00	0.00	6.50	0.00	24.00
2194	9th PzD	05-Jan-45	G	0.00	0.00	12.50	999.90	999.90
2195	9th SSPzD	05-Jan-45	G	6.00	0.00	7.00	999.90	999.90
2196	9th VGD	05-Jan-45	G	0.00	0.00	16.00	999.90	999.90
2197	FBB	05-Jan-45	G	0.00	0.00	7.50	999.90	999.90
2198	FGB	05-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2199	I SSPzK	05-Jan-45	G	2.50	2.50	12.50	999.90	999.90
2200	II SSPzK	05-Jan-45	G	0.00	0.00	15.50	999.90	999.90
2201	Korps Decker	05-Jan-45	G	0.00	0.00	8.50	999.90	24.00
2202	Korps Felber	05-Jan-45	G	1.50	-1.50	24.00	999.90	999.90
2203	LIII K	05-Jan-45	G	0.00	0.00	35.80	0.00	24.00
2204	LVIII PzK	05-Jan-45	G	0.00	0.00	13.50	999.90	999.90
2205	LXVI K	05-Jan-45	G	1.50	-1.50	17.00	999.90	999.90
2206	LXVII K	05-Jan-45	G	0.00	0.00	27.40	0.00	24.00
2207	LXXIV K	05-Jan-45	G	0.00	0.00	32.00	0.00	24.00
2208	LXXX K	05-Jan-45	G	0.00	0.00	32.90	0.00	24.00
2209	LXXXI K	05-Jan-45	G	0.00	0.00	36.00	0.00	24.00
2210	LXXXV K	05-Jan-45	G	0.00	0.00	21.60	0.00	24.00
2211	PzLehrD	05-Jan-45	G	1.50	-1.50	26.50	999.90	999.90
2212	XII SSK	05-Jan-45	G	0.00	0.00	11.50	0.00	24.00
2213	XLVII PzK	05-Jan-45	G	1.50	-1.50	48.00	999.90	999.90
2214	101st AbnD	06-Jan-45	A	2.80	0.00	15.10	0.00	24.00
2215	102d ID	06-Jan-45	A	0.00	0.00	13.00	0.00	24.00
2216	104th ID	06-Jan-45	A	0.00	0.00	11.40	0.00	24.00
2217	106th ID	06-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2218	11th AD	06-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2219	17th AbnD	06-Jan-45	A	1.00	1.00	13.90	999.90	999.90
2220	1st Army	06-Jan-45	A	2.60	2.60	80.00	999.90	999.90
2221	1st ID	06-Jan-45	A	0.00	0.00	20.90	0.00	24.00
2222	26th ID	06-Jan-45	A	0.00	0.00	9.50	0.00	24.00
2223	28th ID	06-Jan-45	A	0.00	0.00	999.90	0.00	24.00
2224	29th Arm Bde	06-Jan-45	B	0.00	0.00	28.00	0.00	0.00
2225	29th ID	06-Jan-45	A	0.00	0.00	8.00	0.00	24.00
2226	2d AD	06-Jan-45	A	2.60	2.60	13.30	999.90	999.90
2227	2d ID	06-Jan-45	A	0.00	0.00	2.40	0.00	24.00
2228	30th ID	06-Jan-45	A	2.70	2.70	22.00	999.90	999.90
2229	35th ID	06-Jan-45	A	0.00	0.00	15.10	999.90	999.90
2230	3d AD	06-Jan-45	A	1.70	1.70	9.60	999.90	999.90
2231	3d Army	06-Jan-45	A	0.00	2.00	175.20	999.90	999.90
2232	3d Cav Gp	06-Jan-45	A	0.00	0.00	18.00	0.00	24.00
2233	4th AD	06-Jan-45	A	0.00	0.00	10.00	0.00	24.00
2234	4th ID	06-Jan-45	A	0.00	0.00	36.60	0.00	24.00
2235	51st ID	06-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2236	53d ID	06-Jan-45	B	0.00	0.00	15.40	0.00	24.00
2237	5th AD	06-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2238	5th ID	06-Jan-45	A	0.00	0.00	16.20	0.00	24.00
2239	6th AD	06-Jan-45	A	0.00	0.00	7.70	999.90	999.90
2240	6th AbnD	06-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2241	75th ID	06-Jan-45	A	3.00	0.00	18.70	0.00	24.00
2242	78th ID	06-Jan-45	A	0.00	0.00	14.60	0.00	24.00
2243	7th AD	06-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2244	80th ID	06-Jan-45	A	0.00	0.00	22.00	0.00	24.00
2245	82d AbnD	06-Jan-45	A	0.90	0.90	18.40	999.90	999.90
2246	83d ID	06-Jan-45	A	0.00	0.00	21.90	0.00	24.00
2247	84th ID	06-Jan-45	A	2.80	2.80	13.60	999.90	999.90
2248	87th ID	06-Jan-45	A	0.00	0.00	18.80	999.90	999.90
2249	8th ID	06-Jan-45	A	0.00	0.00	17.10	0.00	24.00
2250	90th ID	06-Jan-45	A	66.80	0.00	42.70	0.00	24.00
2251	99th ID	06-Jan-45	A	0.00	0.00	4.30	0.00	24.00
2252	9th AD	06-Jan-45	A	0.00	0.00	0.00	0.00	24.00

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PART 5 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2253	9th Army	06-Jan-45	A	0.00	0.00	69.10	999.90	24.00
2254	9th ID	06-Jan-45	A	0.00	0.00	13.20	0.00	24.00
2255	Guards AD	06-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2256	III Corps	06-Jan-45	A	0.00	0.00	28.40	999.90	999.90
2257	V Corps	06-Jan-45	A	0.00	0.00	36.40	0.00	24.00
2258	VII Corps	06-Jan-45	A	2.60	2.60	31.60	999.90	999.90
2259	VIII Corps	06-Jan-45	A	0.00	0.00	42.10	999.90	999.90
2260	XII Corps	06-Jan-45	A	0.00	0.00	79.60	999.90	999.90
2261	XIII Corps	06-Jan-45	A	0.00	0.00	24.40	0.00	24.00
2262	XIX Corps	06-Jan-45	A	0.00	0.00	46.60	0.00	24.00
2263	XVIII Corps	06-Jan-45	A	0.90	0.90	38.70	999.90	999.90
2264	XX Corps	06-Jan-45	A	0.00	0.00	999.90	0.00	24.00
2265	XXX Corps	06-Jan-45	B	3.20	0.00	0.00	0.00	0.00
2266	10th SSPzD	06-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2267	116th PzD	06-Jan-45	G	0.00	0.00	8.50	0.00	24.00
2268	11th PzD	06-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2269	12th SSPzD	06-Jan-45	G	0.50	0.50	3.00	999.90	999.90
2270	12th VGD	06-Jan-45	G	5.00	-5.00	9.00	999.90	999.90
2271	15th Army	06-Jan-45	G	0.00	0.00	94.30	0.00	24.00
2272	15th PzGD	06-Jan-45	G	0.00	0.00	2.00	999.90	999.90
2273	167th VGD	06-Jan-45	G	0.00	0.00	4.50	999.90	999.90
2274	18th VGD	06-Jan-45	G	3.00	-3.00	15.00	999.90	999.90
2275	1st SSPzD	06-Jan-45	G	0.00	0.00	4.00	999.90	999.90
2276	212th VGD	06-Jan-45	G	0.00	0.00	35.00	0.00	24.00
2277	246th VGD	06-Jan-45	G	0.00	0.00	6.00	999.90	999.90
2278	28th VGD	06-Jan-45	G	0.00	0.00	6.50	999.90	999.90
2279	272d VGD	06-Jan-45	G	0.00	0.00	17.00	0.00	24.00
2280	276th VGD	06-Jan-45	G	0.00	0.00	3.00	999.90	999.90
2281	277th VGD	06-Jan-45	G	0.00	0.00	10.00	0.00	24.00
2282	27th SSPzGD	06-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2283	28th SSPzGD	06-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2284	2d PzD	06-Jan-45	G	0.00	0.00	10.50	0.00	24.00
2285	2d SSPzD	06-Jan-45	G	0.00	0.00	7.00	999.90	999.90
2286	326th VGD	06-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2287	340th VGD	06-Jan-45	G	0.00	0.00	3.50	999.90	999.90
2288	352d VGD	06-Jan-45	G	0.00	0.00	10.00	0.00	24.00
2289	353d ID	06-Jan-45	G	0.00	0.00	9.50	999.90	999.90
2290	363d VGD	06-Jan-45	G	0.00	0.00	25.00	0.00	24.00
2291	3d FJD	06-Jan-45	G	0.00	0.00	10.00	999.90	999.90
2292	3d PzGD	06-Jan-45	G	0.00	0.00	3.00	0.00	24.00
2293	580th VGD	06-Jan-45	G	2.00	-2.00	8.00	999.90	999.90
2294	59th ID	06-Jan-45	G	0.00	0.00	11.50	0.00	24.00
2295	5th FJD	06-Jan-45	G	2.00	-2.00	10.00	999.90	999.90
2296	5th PzArmy	06-Jan-45	G	1.50	-1.50	85.90	999.90	999.90
2297	62d VGD	06-Jan-45	G	1.50	-1.50	8.50	999.90	999.90
2298	6th PzArmy	06-Jan-45	G	5.00	-5.00	56.50	999.90	999.90
2299	79th VGD	06-Jan-45	G	0.00	0.00	8.00	0.00	24.00
2300	7th Army	06-Jan-45	G	2.00	-2.00	87.10	999.90	999.90
2301	85th ID	06-Jan-45	G	0.00	0.00	9.00	0.00	24.00
2302	89th ID	06-Jan-45	G	0.00	0.00	6.50	0.00	24.00
2303	9th PzD	06-Jan-45	G	0.00	0.00	12.50	999.90	999.90
2304	9th SSPzD	06-Jan-45	G	14.00	0.00	0.00	0.00	24.00
2305	9th VGD	06-Jan-45	G	2.00	-2.00	16.00	999.90	999.90
2306	FBB	06-Jan-45	G	0.00	0.00	7.50	999.90	999.90
2307	FGB	06-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2308	I SSPzK	06-Jan-45	G	0.50	0.50	10.00	999.90	999.90
2309	II SSPzK	06-Jan-45	G	0.00	0.00	15.50	999.90	999.90
2310	Korps Decker	06-Jan-45	G	0.00	0.00	8.50	999.90	24.00
2311	Korps Feiber	06-Jan-45	G	3.00	-3.00	23.50	999.90	999.90
2312	LIII K	06-Jan-45	G	2.00	-2.00	27.00	999.90	999.90
2313	LVIII PzK	06-Jan-45	G	0.00	0.00	13.50	999.90	999.90
2314	LXVI K	06-Jan-45	G	5.00	-5.00	18.50	999.90	999.90
2315	LXVII K	06-Jan-45	G	0.00	0.00	27.40	0.00	24.00
2316	LXXIV K	06-Jan-45	G	0.00	0.00	32.00	0.00	24.00

ACSDS (SECTION 04-08 JAN 45)

PART 6 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2317	LXXX K	06-Jan-45	G	0.00	0.00	32.90	0.00	24.00
2318	LXXXI K	06-Jan-45	G	0.00	0.00	36.00	0.00	24.00
2319	LXXXV K	06-Jan-45	G	0.00	0.00	21.60	0.00	24.00
2320	PzLehrD	06-Jan-45	G	0.00	0.00	29.00	999.90	999.90
2321	XII SSK	06-Jan-45	G	0.00	0.00	11.50	0.00	24.00
2322	XLVII PzK	06-Jan-45	G	0.00	0.00	51.00	999.90	999.90
2323	101st AbnD	07-Jan-45	A	0.00	0.00	15.10	0.00	24.00
2324	102d ID	07-Jan-45	A	0.00	0.00	13.00	0.00	24.00
2325	104th ID	07-Jan-45	A	0.00	0.00	11.40	0.00	24.00
2326	106th ID	07-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2327	11th AD	07-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2328	17th AbnD	07-Jan-45	A	2.30	2.30	12.50	999.90	999.90
2329	1st Army	07-Jan-45	A	5.40	5.40	80.40	999.90	999.90
2330	1st ID	07-Jan-45	A	0.00	0.00	20.90	0.00	24.00
2331	26th ID	07-Jan-45	A	0.00	0.00	9.50	0.00	24.00
2332	28th ID	07-Jan-45	A	0.00	0.00	999.90	0.00	24.00
2333	29th Arm Bde	07-Jan-45	B	0.00	0.00	28.00	0.00	0.00
2334	29th ID	07-Jan-45	A	0.00	0.00	8.00	0.00	24.00
2335	2d AD	07-Jan-45	A	1.80	1.80	14.00	999.90	999.90
2336	2d ID	07-Jan-45	A	0.00	0.00	2.40	0.00	24.00
2337	30th ID	07-Jan-45	A	1.80	1.80	30.60	999.90	999.90
2338	35th ID	07-Jan-45	A	0.00	0.00	15.10	0.00	24.00
2339	3d AD	07-Jan-45	A	2.70	2.70	8.00	999.90	999.90
2340	3d Army	07-Jan-45	A	3.50	3.50	175.20	999.90	999.90
2341	3d Cav Gp	07-Jan-45	A	0.00	0.00	18.00	0.00	24.00
2342	4th AD	07-Jan-45	A	0.00	0.00	10.00	0.00	24.00
2343	4th ID	07-Jan-45	A	0.00	0.00	36.60	0.00	24.00
2344	51st ID	07-Jan-45	B	39.90	0.00	0.00	0.00	24.00
2345	53d ID	07-Jan-45	B	1.10	1.10	25.40	366.40	142.00
2346	5th AD	07-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2347	5th ID	07-Jan-45	A	0.00	0.00	16.20	0.00	24.00
2348	6th AD	07-Jan-45	A	0.00	0.00	7.70	0.00	24.00
2349	6th AbnD	07-Jan-45	B	0.00	0.00	28.90	0.00	0.00
2350	75th ID	07-Jan-45	A	8.50	0.00	14.40	0.00	24.00
2351	78th ID	07-Jan-45	A	0.00	0.00	14.60	0.00	24.00
2352	7th AD	07-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2353	80th ID	07-Jan-45	A	0.10	0.10	22.00	999.90	999.90
2354	82d AbnD	07-Jan-45	A	5.40	5.40	18.50	999.90	999.90
2355	83d ID	07-Jan-45	A	0.00	0.00	21.90	0.00	24.00
2356	84th ID	07-Jan-45	A	2.50	2.50	11.00	999.90	999.90
2357	87th ID	07-Jan-45	A	2.00	2.00	18.80	999.90	999.90
2358	8th ID	07-Jan-45	A	0.00	0.00	17.10	0.00	24.00
2359	90th ID	07-Jan-45	A	19.30	0.00	42.70	0.00	24.00
2360	99th ID	07-Jan-45	A	0.00	0.00	4.30	0.00	24.00
2361	9th AD	07-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2362	9th Army	07-Jan-45	A	0.00	0.00	69.10	999.90	24.00
2363	9th ID	07-Jan-45	A	0.00	0.00	13.20	0.00	24.00
2364	III Corps	07-Jan-45	A	0.00	0.00	28.40	999.90	999.90
2365	V Corps	07-Jan-45	A	0.00	0.00	36.40	0.00	24.00
2366	VII Corps	07-Jan-45	A	4.00	4.00	32.40	999.90	999.90
2367	VIII Corps	07-Jan-45	A	3.50	3.50	42.10	999.90	999.90
2368	XII Corps	07-Jan-45	A	999.90	0.00	79.60	0.00	24.00
2369	XIII Corps	07-Jan-45	A	0.00	0.00	24.40	0.00	24.00
2370	XIX Corps	07-Jan-45	A	0.00	0.00	46.60	0.00	24.00
2371	XVIII Corps	07-Jan-45	A	5.40	5.40	37.60	999.90	999.90
2372	XX Corps	07-Jan-45	A	0.00	0.00	999.90	0.00	24.00
2373	XXX Corps	07-Jan-45	B	3.70	0.00	0.00	0.00	0.00
2374	10th SSPzD	07-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2375	116th PzD	07-Jan-45	G	1.00	-1.00	8.50	999.90	999.90
2376	11th PzD	07-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2377	12th SSPzD	07-Jan-45	G	0.00	0.00	3.00	0.00	24.00
2378	12th VGD	07-Jan-45	G	1.00	-1.00	9.00	999.90	999.90
2379	15th Army	07-Jan-45	G	0.00	0.00	94.30	0.00	24.00
2380	15th PzGD	07-Jan-45	G	0.00	0.00	2.00	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2381	167th VGD	07-Jan-45	G	0.00	0.00	4.50	999.90	999.90
2382	18th VGD	07-Jan-45	G	1.50	-1.50	16.00	999.90	999.90
2383	1st SSPzD	07-Jan-45	G	0.00	0.00	4.00	999.90	999.90
2384	212th VGD	07-Jan-45	G	0.00	0.00	35.00	0.00	24.00
2385	246th VGD	07-Jan-45	G	0.00	0.00	6.00	999.90	999.90
2386	26th VGD	07-Jan-45	G	0.00	0.00	6.50	999.90	999.90
2387	272d VGD	07-Jan-45	G	0.00	0.00	17.00	0.00	24.00
2388	276th VGD	07-Jan-45	G	0.00	0.00	1.50	999.90	999.90
2389	277th VGD	07-Jan-45	G	0.00	0.00	10.00	0.00	24.00
2390	27th SSPzGD	07-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2391	28th SSPzGD	07-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2392	2d PzD	07-Jan-45	G	0.00	0.00	10.50	0.00	24.00
2393	2d SSPzD	07-Jan-45	G	4.00	-4.00	7.00	999.90	999.90
2394	326th VGD	07-Jan-45	G	8.00	0.00	0.00	0.00	24.00
2395	340th VGD	07-Jan-45	G	0.00	0.00	3.50	999.90	999.90
2396	352d VGD	07-Jan-45	G	0.00	0.00	10.00	0.00	24.00
2397	353d ID	07-Jan-45	G	0.00	0.00	9.50	999.90	999.90
2398	363d VGD	07-Jan-45	G	0.00	0.00	25.00	0.00	24.00
2399	3d FJD	07-Jan-45	G	0.00	0.00	10.00	999.90	999.90
2400	3d PzGD	07-Jan-45	G	0.00	0.00	3.00	999.90	999.90
2401	560th VGD	07-Jan-45	G	0.00	0.00	10.00	999.90	999.90
2402	59th ID	07-Jan-45	G	0.00	0.00	11.50	0.00	24.00
2403	5th FJD	07-Jan-45	G	0.00	0.00	9.50	999.90	999.90
2404	5th PzArmy	07-Jan-45	G	0.00	0.00	85.20	999.90	999.90
2405	62d VGD	07-Jan-45	G	2.50	-2.50	8.00	999.90	999.90
2406	8th PzArmy	07-Jan-45	G	4.00	-4.00	76.00	999.90	999.90
2407	79th VGD	07-Jan-45	G	0.00	0.00	8.00	999.90	999.90
2408	7th Army	07-Jan-45	G	0.00	0.00	87.30	999.90	999.90
2409	85th ID	07-Jan-45	G	0.00	0.00	9.00	0.00	24.00
2410	89th ID	07-Jan-45	G	0.00	0.00	6.50	0.00	24.00
2411	9th PzD	07-Jan-45	G	0.00	0.00	12.50	999.90	999.90
2412	9th SSPzD	07-Jan-45	G	7.00	0.00	0.00	0.00	24.00
2413	9th VGD	07-Jan-45	G	0.00	0.00	14.50	999.90	999.90
2414	FBB	07-Jan-45	G	1.50	0.00	7.50	999.90	999.90
2415	FGB	07-Jan-45	G	18.00	0.00	0.00	999.90	999.90
2416	I SSPzK	07-Jan-45	G	0.00	0.00	10.00	999.90	999.90
2417	II SSPzK	07-Jan-45	G	4.00	-4.00	15.50	999.90	999.90
2418	Korps Decker	07-Jan-45	G	0.00	0.00	8.50	999.90	24.00
2419	Korps Feiber	07-Jan-45	G	2.50	-2.50	24.00	999.90	999.90
2420	LIII K	07-Jan-45	G	0.00	0.00	23.10	999.90	999.90
2421	LVIII PzK	07-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2422	LXVI K	07-Jan-45	G	1.00	-1.00	19.00	999.90	999.90
2423	LXVII K	07-Jan-45	G	0.00	0.00	27.40	0.00	24.00
2424	LXXIV K	07-Jan-45	G	0.00	0.00	32.00	0.00	24.00
2425	LXXX K	07-Jan-45	G	0.00	0.00	32.90	0.00	24.00
2426	LXXXI K	07-Jan-45	G	0.00	0.00	36.00	0.00	24.00
2427	LXXXV K	07-Jan-45	G	0.00	0.00	21.60	999.90	999.90
2428	PzLehrD	07-Jan-45	G	0.00	0.00	29.00	999.90	999.90
2429	XII SSK	07-Jan-45	G	0.00	0.00	11.50	0.00	24.00
2430	XLVII PzK	07-Jan-45	G	0.00	0.00	64.30	999.90	999.90
2431	101st AbnD	08-Jan-45	A	0.00	0.00	15.10	999.90	999.90
2432	102d ID	08-Jan-45	A	0.00	0.00	13.00	0.00	24.00
2433	104th ID	08-Jan-45	A	0.00	0.00	11.40	0.00	24.00
2434	106th ID	08-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2435	11th AD	08-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2436	17th AbnD	08-Jan-45	A	2.20	-2.20	10.80	999.90	999.90
2437	1st Army	08-Jan-45	A	11.30	11.30	87.80	999.90	999.90
2438	1st ID	08-Jan-45	A	0.00	0.00	20.90	0.00	24.00
2439	26th ID	08-Jan-45	A	999.90	0.00	9.50	0.00	24.00
2440	28th ID	08-Jan-45	A	0.00	0.00	999.90	0.00	24.00
2441	29th Arm Bde	08-Jan-45	B	0.00	0.00	28.00	0.00	0.00
2442	29th ID	08-Jan-45	A	0.00	0.00	8.00	0.00	24.00
2443	2d AD	08-Jan-45	A	0.50	0.50	12.90	999.90	999.90
2444	2d ID	08-Jan-45	A	0.00	0.00	2.40	0.00	24.00

ACSDB (SECTION 04-08 JAN 45)

PART 8 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2445	30th ID	08-Jan-45	A	0.20	0.20	32.70	999.90	999.90
2446	35th ID	08-Jan-45	A	0.00	0.00	15.10	0.00	24.00
2447	3d AD	08-Jan-45	A	3.30	3.30	10.00	999.90	999.90
2448	3d Army	08-Jan-45	A	2.00	-2.00	180.80	999.90	999.90
2449	3d Cav Gp	08-Jan-45	A	0.00	0.00	18.00	0.00	24.00
2450	4th AD	08-Jan-45	A	0.00	0.00	10.00	0.00	24.00
2451	4th ID	08-Jan-45	A	0.00	0.00	38.60	0.00	24.00
2452	51st ID	08-Jan-45	B	22.30	0.00	0.00	0.00	24.00
2453	53d ID	08-Jan-45	B	22.00	0.00	16.40	0.00	24.00
2454	5th AD	08-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2455	5th ID	08-Jan-45	A	0.00	0.00	16.20	0.00	24.00
2456	6th AD	08-Jan-45	A	0.00	0.00	7.70	0.00	24.00
2457	6th AbnD	08-Jan-45	B	0.00	0.00	19.10	999.90	999.90
2458	75th ID	08-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2459	78th ID	08-Jan-45	A	0.00	0.00	14.60	0.00	24.00
2460	7th AD	08-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2461	80th ID	08-Jan-45	A	0.00	0.00	22.30	0.80	23.30
2462	82d AbnD	08-Jan-45	A	0.00	0.00	21.10	999.90	999.90
2463	83d ID	08-Jan-45	A	3.20	0.00	21.90	0.00	24.00
2464	84th ID	08-Jan-45	A	3.60	3.60	18.10	999.90	999.90
2465	87th ID	08-Jan-45	A	2.00	-2.00	17.80	999.90	999.90
2466	8th ID	08-Jan-45	A	0.00	0.00	17.10	0.00	24.00
2467	90th ID	08-Jan-45	A	76.40	0.00	0.00	0.00	24.00
2468	94th ID	08-Jan-45	A	0.00	0.00	42.70	0.00	24.00
2469	99th ID	08-Jan-45	A	0.00	0.00	4.30	0.00	24.00
2470	9th AD	08-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2471	9th Army	08-Jan-45	A	0.00	0.00	69.10	999.90	24.00
2472	9th ID	08-Jan-45	A	0.00	0.00	13.20	0.00	24.00
2473	Guards AD	08-Jan-45	B	0.00	0.00	0.00	0.00	0.00
2474	III Corps	08-Jan-45	A	1.00	1.00	28.40	999.90	999.90
2475	V Corps	08-Jan-45	A	0.00	0.00	38.40	0.00	24.00
2476	VII Corps	08-Jan-45	A	11.30	11.30	37.40	999.90	999.90
2477	VIII Corps	08-Jan-45	A	2.00	-2.00	43.60	999.90	999.90
2478	XII Corps	08-Jan-45	A	0.00	0.00	79.60	999.90	999.90
2479	XIII Corps	08-Jan-45	A	0.00	0.00	24.40	0.00	24.00
2480	XIX Corps	08-Jan-45	A	0.00	0.00	46.60	0.00	24.00
2481	XVIII Corps	08-Jan-45	A	0.00	0.00	42.80	999.90	999.90
2482	XX Corps	08-Jan-45	A	0.00	0.00	999.90	0.00	24.00
2483	XXX Corps	08-Jan-45	B	5.20	0.00	0.00	0.00	0.00
2484	10th SSPzD	08-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2485	116th PzD	08-Jan-45	G	3.00	-3.00	9.00	0.00	24.00
2486	11th PzD	08-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2487	12th SSPzD	08-Jan-45	G	7.00	0.00	3.00	999.90	999.90
2488	12th VGD	08-Jan-45	G	2.00	-2.00	9.00	999.90	999.90
2489	15th Army	08-Jan-45	G	0.00	0.00	94.30	0.00	24.00
2490	15th PzGD	08-Jan-45	G	0.00	0.00	2.00	999.90	999.90
2491	167th VGD	08-Jan-45	G	0.00	0.00	4.50	999.90	999.90
2492	18th VGD	08-Jan-45	G	0.00	0.00	23.00	999.90	999.90
2493	1st SSPzD	08-Jan-45	G	0.00	0.00	4.00	999.90	999.90
2494	212th VGD	08-Jan-45	G	0.00	0.00	35.00	0.00	24.00
2495	246th VGD	08-Jan-45	G	0.00	0.00	8.00	999.90	999.90
2496	26th VGD	08-Jan-45	G	0.00	0.00	8.50	999.90	999.90
2497	272d VGD	08-Jan-45	G	0.00	0.00	17.00	0.00	24.00
2498	276th VGD	08-Jan-45	G	0.00	0.00	5.00	999.90	999.90
2499	277th VGD	08-Jan-45	G	0.00	0.00	10.00	0.00	24.00
2500	27th SSPzGD	08-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2501	28th SSPzGD	08-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2502	2d PzD	08-Jan-45	G	0.00	0.00	10.50	0.00	24.00
2503	2d SSPzD	08-Jan-45	G	0.00	0.00	21.30	999.90	999.90
2504	326th VGD	08-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2505	340th VGD	08-Jan-45	G	0.00	0.00	3.50	999.90	999.90
2506	352d VGD	08-Jan-45	G	0.00	0.00	10.00	0.00	24.00
2507	353d ID	08-Jan-45	G	0.00	0.00	9.50	999.90	999.90
2508	383d VGD	08-Jan-45	G	0.00	0.00	25.00	0.00	24.00

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2509	3d FJD	08-Jan-45	G	0.00	0.00	10.00	999.90	999.90
2510	3d PzGD	08-Jan-45	G	0.00	0.00	3.00	999.90	999.90
2511	560th VGD	08-Jan-45	G	3.00	-3.00	7.00	999.90	999.90
2512	59th ID	08-Jan-45	G	0.00	0.00	11.50	0.00	24.00
2513	5th FJD	08-Jan-45	G	1.00	-1.00	9.50	999.90	999.90
2514	5th PzArmy	08-Jan-45	G	4.30	-4.30	85.20	999.90	999.90
2515	62d VGD	08-Jan-45	G	2.00	-2.00	6.00	999.90	999.90
2516	6th PzArmy	08-Jan-45	G	3.00	-3.00	62.20	999.90	999.90
2517	79th VGD	08-Jan-45	G	0.00	0.00	8.00	0.00	24.00
2518	7th Army	08-Jan-45	G	1.50	-1.00	87.50	999.90	999.90
2519	85th ID	08-Jan-45	G	0.00	0.00	9.00	0.00	24.00
2520	89th ID	08-Jan-45	G	0.00	0.00	6.50	0.00	24.00
2521	9th PzD	08-Jan-45	G	3.50	-3.50	12.50	999.90	999.90
2522	9th SSPzD	08-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2523	9th VGD	08-Jan-45	G	1.50	-1.50	10.50	999.90	999.90
2524	FBB	08-Jan-45	G	0.00	0.00	7.00	999.90	999.90
2525	FGB	08-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2526	I SSPzK	08-Jan-45	G	0.00	0.00	10.00	999.90	999.90
2527	II SSPzK	08-Jan-45	G	3.00	-3.00	24.60	999.90	999.90
2528	Korps Decker	08-Jan-45	G	0.00	0.00	8.50	999.90	999.90
2529	Korps Felber	08-Jan-45	G	2.00	-2.00	29.00	999.90	999.90
2530	LIII K	08-Jan-45	G	1.50	-1.00	23.10	999.90	999.90
2531	LVIII PzK	08-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2532	LXVI K	08-Jan-45	G	3.00	-3.00	16.60	999.90	999.90
2533	LXVII K	08-Jan-45	G	0.00	0.00	27.40	0.00	24.00
2534	LXXIV K	08-Jan-45	G	0.00	0.00	32.00	0.00	24.00
2535	LXXX K	08-Jan-45	G	0.00	0.00	32.90	0.00	24.00
2536	LXXXI K	08-Jan-45	G	0.00	0.00	36.00	0.00	24.00
2537	LXXXV K	08-Jan-45	G	0.00	0.00	23.90	0.00	24.00
2538	PzLehrD	08-Jan-45	G	0.00	0.00	29.00	999.90	999.90
2539	XII SSK	08-Jan-45	G	0.00	0.00	11.50	0.00	24.00
2540	XLVII PzK	08-Jan-45	G	0.00	0.00	64.30	999.90	999.90

ACSDB (SECTION 09-13 JAN 45)

PART 1 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2541	101st AbnD	09-Jan-45	A	1.10	1.10	999.90	999.90	999.90
2542	102d ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2543	104th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2544	106th ID	09-Jan-45	A	23.50	0.00	0.00	0.00	24.00
2545	11th AD	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2546	17th AbnD	09-Jan-45	A	1.50	-1.50	999.90	999.90	999.90
2547	1st Army	09-Jan-45	A	2.50	2.50	999.90	999.90	999.90
2548	1st ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2549	26th ID	09-Jan-45	A	0.70	0.70	999.90	999.90	999.90
2550	28th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2551	29th Arm Bde	09-Jan-45	B	3.00	3.00	0.00	0.00	0.00
2552	29th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2553	2d AD	09-Jan-45	A	2.10	2.10	999.90	999.90	999.90
2554	2d ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2555	30th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2556	35th ID	09-Jan-45	A	1.00	1.00	999.90	999.90	999.90
2557	3d AD	09-Jan-45	A	1.10	0.00	0.00	0.00	24.00
2558	3d Army	09-Jan-45	A	2.80	2.80	999.90	999.90	999.90
2559	3d Cav Gp	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2560	4th AD	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2561	4th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2562	51st ID	09-Jan-45	B	22.30	22.30	999.90	999.90	999.90
2563	53d ID	09-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2564	5th AD	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2565	5th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2566	6th AD	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2567	6th AbnD	09-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2568	75th ID	09-Jan-45	A	19.50	0.00	0.00	0.00	24.00
2569	78th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2570	7th AD	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2571	80th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2572	82d AbnD	09-Jan-45	A	1.30	1.30	999.90	999.90	999.90
2573	83d ID	09-Jan-45	A	6.70	1.40	999.90	999.90	999.90
2574	84th ID	09-Jan-45	A	2.10	2.10	999.90	999.90	999.90
2575	87th ID	09-Jan-45	A	2.80	3.80	999.90	999.90	999.90
2576	8th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2577	90th ID	09-Jan-45	A	1.60	1.60	999.90	999.90	999.90
2578	94th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2579	99th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2580	9th AD	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2581	9th Army	09-Jan-45	A	0.00	0.00	999.90	999.90	24.00
2582	9th ID	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2583	III Corps	09-Jan-45	A	1.00	1.00	999.90	999.90	999.90
2584	V Corps	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2585	VII Corps	09-Jan-45	A	2.50	2.50	999.90	999.90	999.90
2586	VIII Corps	09-Jan-45	A	2.80	2.80	999.90	999.90	999.90
2587	XII Corps	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2588	XIII Corps	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2589	XIX Corps	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2590	XVIII Corps	09-Jan-45	A	1.30	1.30	999.90	999.90	999.90
2591	XX Corps	09-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2592	XXX Corps	09-Jan-45	B	5.10	0.00	999.90	999.90	999.90
2593	10th SSPzD	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2594	116th PzD	09-Jan-45	G	4.50	-4.50	0.00	0.00	24.00
2595	11th PzD	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2596	12th SSPzD	09-Jan-45	G	20.00	0.00	0.00	0.00	24.00
2597	12th VGD	09-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2598	15th Army	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2599	15th PzGD	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2600	167th VGD	09-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2601	18th VGD	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2602	1st SSPzD	09-Jan-45	G	15.00	0.00	999.90	999.90	999.90
2603	212th VGD	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2604	246th VGD	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2605	26th VGD	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2606	276th VGD	09-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2607	277th VGD	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2608	27th SSPzGD	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2609	28th SSPzGD	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2610	2d PzD	09-Jan-45	G	13.00	0.00	0.00	0.00	24.00
2611	2d SSPzD	09-Jan-45	G	17.50	-3.00	999.90	999.90	999.90
2612	326th VGD	09-Jan-45	G	5.00	0.00	0.00	0.00	24.00
2613	340th VGD	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2614	352d VGD	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2615	353d ID	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2616	363d VGD	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2617	3d FJD	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2618	3d PzGD	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2619	560th VGD	09-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2620	59th ID	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2621	5th FJD	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2622	5th PzArmy	09-Jan-45	G	17.30	-17.30	999.90	999.90	999.90
2623	62d VGD	09-Jan-45	G	13.00	-1.00	999.90	999.90	999.90
2624	6th PzArmy	09-Jan-45	G	4.50	-4.50	999.90	999.90	999.90
2625	79th VGD	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2626	7th Army	09-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2627	85th ID	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2628	89th ID	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2629	9th PzD	09-Jan-45	G	21.50	0.00	999.90	999.90	999.90
2630	9th SSPzD	09-Jan-45	G	3.50	0.00	999.90	999.90	999.90
2631	9th VGD	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2632	FBB	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2633	FGB	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2634	I SSPzK	09-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2635	II SSPzK	09-Jan-45	G	4.50	-4.50	999.90	999.90	999.90
2636	Korps Decker	09-Jan-45	G	0.00	0.00	999.90	999.90	24.00
2637	Korps Felber	09-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2638	LIII K	09-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2639	LVIII PzK	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2640	LXVI K	09-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2641	LXVII K	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2642	LXXIV K	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2643	LXXX K	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2644	LXXXI K	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2645	LXXXV K	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2646	PzLehrD	09-Jan-45	G	10.00	0.00	999.90	999.90	999.90
2647	XII SSK	09-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2648	XLVII PzK	09-Jan-45	G	13.00	0.00	0.00	0.00	24.00
2649	101st AbnD	10-Jan-45	A	0.90	0.90	999.90	999.90	999.90
2650	102d ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2651	104th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2652	106th ID	10-Jan-45	A	7.70	0.00	0.00	0.00	24.00
2653	11th AD	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2654	17th AbnD	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2655	1st Army	10-Jan-45	A	4.00	2.30	999.90	999.90	999.90
2656	1st ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2657	26th ID	10-Jan-45	A	0.40	0.40	999.90	999.90	999.90
2658	28th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2659	29th Arm Bde	10-Jan-45	B	0.00	0.00	0.00	0.00	0.00
2660	29th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2661	2d AD	10-Jan-45	A	1.30	1.30	999.90	999.90	999.90
2662	2d ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2663	30th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2664	35th ID	10-Jan-45	A	1.00	1.00	999.90	999.90	999.90
2665	3d AD	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2666	3d Army	10-Jan-45	A	2.40	2.40	999.90	999.90	999.90
2667	3d Cav Gp	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2668	4th AD	10-Jan-45	A	8.70	8.70	999.90	999.90	999.90
2669	4th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00

ACSD8 (SECTION 09-13 JAN 45)

PART 3 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2670	51st ID	10-Jan-45	B	3.00	0.00	0.00	0.00	24.00
2671	53d ID	10-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2672	5th AD	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2673	5th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2674	6th AD	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2675	6th AbnD	10-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2676	75th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2677	78th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2678	7th AD	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2679	80th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2680	82d AbnD	10-Jan-45	A	0.50	0.00	0.00	0.00	24.00
2681	83d ID	10-Jan-45	A	1.90	1.90	999.90	999.90	999.90
2682	84th ID	10-Jan-45	A	1.00	1.00	999.90	999.90	999.90
2683	87th ID	10-Jan-45	A	1.00	1.00	999.90	999.90	999.90
2684	8th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2685	90th ID	10-Jan-45	A	1.30	1.30	999.90	999.90	999.90
2686	94th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2687	99th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2688	9th AD	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2689	9th Army	10-Jan-45	A	0.00	0.00	999.90	999.90	999.90
2690	9th ID	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2691	Guards AD	10-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2692	III Corps	10-Jan-45	A	2.40	2.40	999.90	999.90	999.90
2693	V Corps	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2694	VII Corps	10-Jan-45	A	2.30	2.30	999.90	999.90	999.90
2695	VIII Corps	10-Jan-45	A	1.40	1.40	999.90	999.90	999.90
2696	XII Corps	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2697	XIII Corps	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2698	XIX Corps	10-Jan-45	A	0.00	0.00	999.90	999.90	999.90
2699	XVIII Corps	10-Jan-45	A	4.00	0.00	0.00	0.00	24.00
2700	XX Corps	10-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2701	XXX Corps	10-Jan-45	B	1.20	0.00	0.00	0.00	0.00
2702	10th SSPzD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2703	116th PzD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2704	11th PzD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2705	12th SSPzD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2706	12th VGD	10-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2707	15th Army	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2708	15th PzGD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2709	167th VGD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2710	18th VGD	10-Jan-45	G	4.50	-1.50	999.90	999.90	999.90
2711	1st SSPzD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2712	212th VGD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2713	246th VGD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2714	26th VGD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2715	272d VGD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2716	276th VGD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2717	277th VGD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2718	27th SSPzGD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2719	28th SSPzGD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2720	2d PzD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2721	2d SSPzD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2722	326th VGD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2723	340th VGD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2724	352d VGD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2725	353d ID	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2726	363d VGD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2727	3d FJD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2728	3d PzGD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2729	560th VGD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2730	59th ID	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2731	5th FJD	10-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2732	5th PzArmy	10-Jan-45	G	1.40	-1.40	999.90	999.90	999.90
2733	62d VGD	10-Jan-45	G	0.00	0.00	24.00	24.00	0.00

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2734	8th PzArmy	10-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2735	79th VGD	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2736	7th Army	10-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2737	85th ID	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2738	89th ID	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2739	9th PzD	10-Jan-45	G	6.50	0.00	999.90	999.90	999.90
2740	9th SSPzD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2741	9th VGD	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2742	FBB	10-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2743	FGB	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2744	I SSPzK	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2745	II SSPzK	10-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2746	Korps Decker	10-Jan-45	G	0.00	0.00	999.90	999.90	24.00
2747	Korps Felber	10-Jan-45	G	1.50	-1.50	999.90	999.90	999.90
2748	LIII K	10-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2749	LVIII PzK	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2750	LXVI K	10-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2751	LXVII K	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2752	LXXIV K	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2753	LXXX K	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2754	LXXXI K	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2755	LXXXV K	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2756	PzLehrD	10-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2757	XII SSK	10-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2758	XLVII PzK	10-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2759	101st AbnD	11-Jan-45	A	0.90	0.90	999.90	999.90	999.90
2760	102d ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2761	104th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2762	106th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2763	11th AD	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2764	17th AbnD	11-Jan-45	A	999.90	0.00	0.00	0.00	24.00
2765	1st Army	11-Jan-45	A	3.70	3.70	999.90	999.90	999.90
2766	1st ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2767	26th ID	11-Jan-45	A	0.80	0.80	999.90	999.90	999.90
2768	28th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2769	29th Arm Bde	11-Jan-45	B	0.00	0.00	0.00	0.00	0.00
2770	29th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2771	2d AD	11-Jan-45	A	0.00	0.00	999.90	999.90	999.90
2772	2d ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2773	30th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2774	35th ID	11-Jan-45	A	0.00	0.00	999.90	999.90	999.90
2775	3d AD	11-Jan-45	A	3.70	3.70	999.90	999.90	999.90
2776	3d Army	11-Jan-45	A	3.60	3.60	999.90	999.90	999.90
2777	3d Cav Gp	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2778	4th AD	11-Jan-45	A	0.00	0.00	999.90	999.90	999.90
2779	4th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2780	51st ID	11-Jan-45	B	6.40	6.40	999.90	999.90	999.90
2781	53d ID	11-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2782	5th AD	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2783	5th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2784	6th AD	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2785	6th AbnD	11-Jan-45	B	0.00	0.00	999.90	999.90	999.90
2786	75th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2787	78th ID	11-Jan-45	A	1.40	1.40	999.90	999.90	999.90
2788	7th AD	11-Jan-45	A	24.10	0.00	0.00	0.00	24.00
2789	80th ID	11-Jan-45	A	1.20	1.20	999.90	999.90	999.90
2790	82d AbnD	11-Jan-45	A	19.00	0.00	0.00	0.00	24.00
2791	83d ID	11-Jan-45	A	1.40	1.40	999.90	999.90	999.90
2792	84th ID	11-Jan-45	A	1.50	1.50	999.90	999.90	999.90
2793	87th ID	11-Jan-45	A	3.60	3.60	999.90	999.90	999.90
2794	8th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2795	90th ID	11-Jan-45	A	1.80	1.80	999.90	999.90	999.90
2796	94th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2797	99th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00

ACSDS (SECTION 09-13 JAN 45)

PART 5 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2798	9th AD	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2799	9th Army	11-Jan-45	A	2.10	2.10	999.90	999.90	999.90
2800	9th ID	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2801	Guards AD	11-Jan-45	B	0.00	0.00	0.00	0.00	0.00
2802	III Corps	11-Jan-45	A	1.50	1.50	999.90	999.90	999.90
2803	V Corps	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2804	VII Corps	11-Jan-45	A	3.70	3.70	999.90	999.90	999.90
2805	VIII Corps	11-Jan-45	A	3.60	3.60	999.90	999.90	999.90
2806	XII Corps	11-Jan-45	A	2.80	2.80	999.90	999.90	999.90
2807	XIII Corps	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2808	XIX Corps	11-Jan-45	A	2.10	2.10	999.90	999.90	999.90
2809	XVIII Corps	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2810	XX Corps	11-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2811	XXX Corps	11-Jan-45	B	4.50	0.00	0.00	0.00	0.00
2812	10th SSPzD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2813	116th PzD	11-Jan-45	G	2.00	-2.00	0.00	0.00	24.00
2814	11th PzD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2815	12th SSPzD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2816	12th VGD	11-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2817	15th Army	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2818	15th PzGD	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2819	167th VGD	11-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2820	18th VGD	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2821	1st SSPzD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2822	212th VGD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2823	246th VGD	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2824	26th VGD	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2825	272d VGD	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2826	276th VGD	11-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2827	277th VGD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2828	27th SSPzGD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2829	28th SSPzGD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2830	2d PzD	11-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2831	2d SSPzD	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2832	326th VGD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2833	340th VGD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2834	352d VGD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2835	353d ID	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2836	363d VGD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2837	3d FJD	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2838	3d PzGD	11-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2839	560th VGD	11-Jan-45	G	1.50	-1.50	999.90	999.90	999.90
2840	59th ID	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2841	5th FJD	11-Jan-45	G	6.00	-6.00	999.90	999.90	999.90
2842	5th PzArmy	11-Jan-45	G	11.90	-11.90	999.90	999.90	999.90
2843	62d VGD	11-Jan-45	G	0.00	0.00	24.00	24.00	0.00
2844	6th PzArmy	11-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2845	79th VGD	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2846	7th Army	11-Jan-45	G	6.00	-6.00	999.90	999.90	999.90
2847	85th ID	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2848	89th ID	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2849	9th PzD	11-Jan-45	G	6.00	0.00	0.00	0.00	24.00
2850	9th SSPzD	11-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2851	9th VGD	11-Jan-45	G	1.50	-1.50	999.90	999.90	999.90
2852	F88	11-Jan-45	G	11.00	0.00	999.90	999.90	999.90
2853	F88	11-Jan-45	G	8.00	0.00	999.90	999.90	999.90
2854	I SSPzK	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2855	II SSPzK	11-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2856	Korps Felber	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2857	LIII K	11-Jan-45	G	6.00	-6.00	999.90	999.90	999.90
2858	LVIII PzK	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2859	LXVI K	11-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2860	LXVII K	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2861	LXXIV K	11-Jan-45	G	0.00	0.00	999.90	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2862	LXXX K	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2863	LXXXI K	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2864	LXXXV K	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2865	PzLehrD	11-Jan-45	G	9.00	9.00	999.90	999.90	999.90
2866	XII SSK	11-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2867	XLVII PzK	11-Jan-45	G	9.00	-2.00	999.90	999.90	999.90
2868	101st AbnD	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2869	102d ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2870	104th ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2871	106th ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2872	11th AD	12-Jan-45	A	17.10	0.00	0.00	0.00	24.00
2873	17th AbnD	12-Jan-45	A	0.00	0.00	999.90	999.90	999.90
2874	1st Army	12-Jan-45	A	3.70	3.00	999.90	999.90	999.90
2875	1st ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2876	26th ID	12-Jan-45	A	2.00	2.00	999.90	999.90	999.90
2877	28th ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2878	29th Arm Bde	12-Jan-45	B	0.00	0.00	0.00	0.00	0.00
2879	29th ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2880	2d AD	12-Jan-45	A	3.00	3.00	999.90	999.90	999.90
2881	2d ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2882	30th ID	12-Jan-45	A	1.90	0.00	0.00	0.00	24.00
2883	35th ID	12-Jan-45	A	0.00	0.00	999.90	999.90	999.90
2884	3d AD	12-Jan-45	A	3.00	3.00	999.90	999.90	999.90
2885	3d Army	12-Jan-45	A	2.50	2.50	999.90	999.90	999.90
2886	3d Cav Gp	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2887	4th AD	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2888	4th ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2889	51st ID	12-Jan-45	B	5.00	5.00	999.90	999.90	999.90
2890	53d ID	12-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2891	5th AD	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2892	5th ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2893	6th AD	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2894	6th AbnD	12-Jan-45	B	0.00	0.00	0.00	0.00	0.00
2895	75th ID	12-Jan-45	A	0.00	0.00	999.90	999.90	999.90
2896	78th ID	12-Jan-45	A	0.10	0.10	999.90	999.90	999.90
2897	7th AD	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2898	80th ID	12-Jan-45	A	1.00	0.00	0.00	0.00	24.00
2899	82d AbnD	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2900	83d ID	12-Jan-45	A	2.00	2.00	999.90	999.90	999.90
2901	84th ID	12-Jan-45	A	1.60	1.60	999.90	999.90	999.90
2902	87th ID	12-Jan-45	A	1.20	1.20	999.90	999.90	999.90
2903	8th ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2904	90th ID	12-Jan-45	A	2.30	2.30	999.90	999.90	999.90
2905	94th ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2906	99th ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2907	9th AD	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2908	9th Army	12-Jan-45	A	0.00	0.00	999.90	999.90	24.00
2909	9th ID	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2910	Guards AD	12-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2911	III Corps	12-Jan-45	A	2.50	2.50	999.90	999.90	999.90
2912	V Corps	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2913	VII Corps	12-Jan-45	A	3.40	3.00	999.90	999.90	999.90
2914	VIII Corps	12-Jan-45	A	2.40	2.40	999.90	999.90	999.90
2915	XII Corps	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2916	XIII Corps	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2917	XIX Corps	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2918	XVIII Corps	12-Jan-45	A	3.70	0.00	0.00	0.00	24.00
2919	XX Corps	12-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2920	XXX Corps	12-Jan-45	B	3.60	0.00	999.90	999.90	999.90
2921	10th SSPzD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2922	116th PzD	12-Jan-45	G	9.00	-9.00	0.00	0.00	24.00
2923	11th PzD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2924	12th SSPzD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2925	12th VGD	12-Jan-45	G	2.00	-2.00	999.90	999.90	999.90

ACSDB (SECTION 09-13 JAN 45)

PART 7 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2928	15th Army	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2927	15th PzGD	12-Jan-45	G	4.00	-4.00	999.90	999.90	999.90
2928	167th VGD	12-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2929	18th VGD	12-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2930	1st SSPzD	12-Jan-45	G	3.00	0.00	0.00	0.00	24.00
2931	212th VGD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2932	246th VGD	12-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2933	26th VGD	12-Jan-45	G	1.50	-1.50	999.90	999.90	999.90
2934	272d VGD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2935	276th VGD	12-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2936	277th VGD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2937	27th SSPzGD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2938	28th SSPzGD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2939	2d PzD	12-Jan-45	G	12.50	0.00	999.90	999.90	999.90
2940	2d SSPzD	12-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2941	326th VGD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2942	340th VGD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2943	352d VGD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2944	353d ID	12-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2945	363d VGD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2946	3d FJD	12-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2947	3d PzGD	12-Jan-45	G	15.00	0.00	999.90	999.90	999.90
2948	560th VGD	12-Jan-45	G	3.00	-3.00	999.90	999.90	999.90
2949	59th ID	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2950	5th FJD	12-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2951	5th PzArmy	12-Jan-45	G	5.10	-5.10	999.90	999.90	999.90
2952	62d VGD	12-Jan-45	G	0.00	0.00	24.00	24.00	0.00
2953	6th PzArmy	12-Jan-45	G	9.00	-9.00	999.90	999.90	999.90
2954	79th VGD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2955	7th Army	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2956	85th ID	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2957	89th ID	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2958	9th PzD	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2959	9th SSPzD	12-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
2960	9th VGD	12-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2961	FBB	12-Jan-45	G	27.00	0.00	0.00	0.00	24.00
2962	FGB	12-Jan-45	G	9.50	0.00	0.00	0.00	24.00
2963	I SSPzK	12-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2964	II SSPzK	12-Jan-45	G	9.00	-9.00	999.90	999.90	999.90
2965	Korps Felber	12-Jan-45	G	0.00	0.00	999.90	999.90	999.90
2966	LIII K	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2967	LVIII PzK	12-Jan-45	G	1.50	-1.50	999.90	999.90	999.90
2968	LXVI K	12-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
2969	LXVII K	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2970	LXXIV K	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2971	LXXX K	12-Jan-45	G	10.50	0.00	0.00	0.00	24.00
2972	LXXXI K	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2973	PzLehrD	12-Jan-45	G	4.00	-4.00	999.90	999.90	999.90
2974	XII SSK	12-Jan-45	G	0.00	0.00	0.00	0.00	24.00
2975	XLVII PzK	12-Jan-45	G	4.00	-4.00	999.90	999.90	999.90
2976	101st AbnD	13-Jan-45	A	1.00	1.00	999.90	999.90	999.90
2977	102d ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2978	104th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2979	106th ID	13-Jan-45	A	1.50	1.50	999.90	999.90	999.90
2980	11th AD	13-Jan-45	A	3.00	3.00	999.90	999.90	999.90
2981	17th AbnD	13-Jan-45	A	2.20	2.20	999.90	999.90	999.90
2982	1st Army	13-Jan-45	A	4.30	4.30	999.90	999.90	999.90
2983	1st ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2984	26th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2985	28th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2986	29th Arm Bde	13-Jan-45	B	58.30	0.00	0.00	0.00	0.00
2987	29th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2988	2d AD	13-Jan-45	A	3.50	3.50	999.90	999.90	999.90
2989	2d ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
2990	30th ID	13-Jan-45	A	999.90	0.00	999.90	999.90	999.90
2991	35th ID	13-Jan-45	A	2.20	0.00	0.00	0.00	24.00
2992	3d AD	13-Jan-45	A	2.80	2.80	999.90	999.90	999.90
2993	3d Army	13-Jan-45	A	4.00	4.00	999.90	999.90	999.90
2994	3d Cav Gp	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2995	4th AD	13-Jan-45	A	999.90	0.00	0.00	0.00	24.00
2996	4th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
2997	51st ID	13-Jan-45	B	3.40	3.40	999.90	999.90	999.90
2998	53d ID	13-Jan-45	B	0.00	0.00	0.00	0.00	24.00
2999	5th AD	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3000	5th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3001	6th AD	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3002	6th AbnD	13-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3003	75th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3004	78th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3005	7th AD	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3006	80th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3007	82d AbnD	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3008	83d ID	13-Jan-45	A	0.00	0.00	999.90	999.90	999.90
3009	84th ID	13-Jan-45	A	3.50	3.50	999.90	999.90	999.90
3010	87th ID	13-Jan-45	A	3.20	3.20	999.90	999.90	999.90
3011	8th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3012	90th ID	13-Jan-45	A	0.00	0.00	999.90	999.90	999.90
3013	94th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3014	99th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3015	9th AD	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3016	9th Army	13-Jan-45	A	0.00	0.00	999.90	999.90	24.00
3017	9th ID	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3018	Guards AD	13-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3019	III Corps	13-Jan-45	A	0.50	0.50	999.90	999.90	999.90
3020	V Corps	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3021	VII Corps	13-Jan-45	A	4.30	4.30	999.90	999.90	999.90
3022	VIII Corps	13-Jan-45	A	5.40	5.40	999.90	999.90	999.90
3023	XII Corps	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3024	XIII Corps	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3025	XIX Corps	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3026	XVIII Corps	13-Jan-45	A	1.90	1.90	999.90	999.90	999.90
3027	XX Corps	13-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3028	XXX Corps	13-Jan-45	B	6.90	0.00	999.90	999.90	999.90
3029	10th SSPzD	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3030	116th PzD	13-Jan-45	G	6.00	-6.00	0.00	0.00	24.00
3031	11th PzD	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3032	12th SSPzD	13-Jan-45	G	20.00	0.00	0.00	0.00	24.00
3033	12th VGD	13-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
3034	15th Army	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3035	15th PzGD	13-Jan-45	G	26.00	0.00	999.90	999.90	999.90
3036	167th VGD	13-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
3037	18th VGD	13-Jan-45	G	1.00	-1.00	999.90	999.90	999.90
3038	1st SSPzD	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3039	212th VGD	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3040	246th VGD	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3041	26th VGD	13-Jan-45	G	2.50	-2.50	999.90	999.90	999.90
3042	272d VGD	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3043	276th VGD	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3044	277th VGD	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3045	27th SSPzGD	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3046	28th SSPzGD	13-Jan-45	G	25.50	0.00	0.00	0.00	24.00
3047	2d PzD	13-Jan-45	G	21.00	0.00	999.90	999.90	999.90
3048	2d SSPzD	13-Jan-45	G	3.00	-3.00	999.90	999.90	999.90
3049	326th VGD	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3050	340th VGD	13-Jan-45	G	2.00	-2.00	999.90	999.90	999.90
3051	352d VGD	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3052	353d ID	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3053	363d VGD	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00

ACSOB (SECTION 09-13 JAN 45)

PART 9 OF 9

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
3054	3d FJD	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3055	3d PzGD	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3056	580th VGD	13-Jan-45	G	8.00	-4.00	999.90	999.90	999.90
3057	59th ID	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3058	5th FJD	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3059	5th PzArmy	13-Jan-45	G	6.50	-6.50	999.90	999.90	999.90
3060	62d VGD	13-Jan-45	G	8.50	0.00	24.00	24.00	0.00
3061	6th PzArmy	13-Jan-45	G	6.00	-6.00	999.90	999.90	999.90
3062	79th VGD	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3063	7th Army	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3064	85th ID	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3065	89th ID	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3066	9th PzD	13-Jan-45	G	5.00	0.00	0.00	0.00	24.00
3067	9th SSPzD	13-Jan-45	G	2.50	-2.50	999.90	999.90	999.90
3068	9th VGD	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3069	F8B	13-Jan-45	G	10.00	0.00	0.00	0.00	24.00
3070	FGB	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3071	I SSPzK	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3072	II SSPzK	13-Jan-45	G	6.00	-6.00	999.90	999.90	999.90
3073	LIII K	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3074	LVIII PzK	13-Jan-45	G	2.50	-2.50	999.90	999.90	999.90
3075	LXVI K	13-Jan-45	G	4.00	-4.00	999.90	999.90	999.90
3076	LXVII K	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3077	LXXIV K	13-Jan-45	G	0.00	0.00	999.90	999.90	999.90
3078	LXXX K	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3079	LXXXI K	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3080	PzLehrD	13-Jan-45	G	8.00	-8.00	999.90	999.90	999.90
3081	XII SSK	13-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3082	XIII K	13-Jan-45	G	2.50	-2.50	999.90	999.90	999.90
3083	XLVII PzK	13-Jan-45	G	8.00	-8.00	999.90	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
3084	101st AbnD	14-Jan-45	A	0.00	0.00	5.80	999.90	999.90
3085	102d ID	14-Jan-45	A	0.00	0.00	13.00	0.00	24.00
3086	104th ID	14-Jan-45	A	0.00	0.00	11.40	0.00	24.00
3087	106th ID	14-Jan-45	A	4.80	1.50	9.90	999.90	999.90
3088	11th AD	14-Jan-45	A	2.40	2.40	7.40	999.90	999.90
3089	17th AbnD	14-Jan-45	A	5.20	5.20	7.00	999.90	999.90
3090	1st Army	14-Jan-45	A	4.30	4.30	88.50	999.90	999.90
3091	1st ID	14-Jan-45	A	0.00	0.00	20.90	0.00	24.00
3092	28th ID	14-Jan-45	A	2.00	2.00	6.90	999.90	999.90
3093	28th ID	14-Jan-45	A	0.00	0.00	999.90	0.00	24.00
3094	29th Arm Bde	14-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3095	29th ID	14-Jan-45	A	0.00	0.00	8.00	0.00	24.00
3096	2d AD	14-Jan-45	A	3.90	3.90	7.10	999.90	999.90
3097	2d ID	14-Jan-45	A	0.00	0.00	2.40	0.00	24.00
3098	30th ID	14-Jan-45	A	2.50	2.50	31.90	999.90	999.90
3099	35th ID	14-Jan-45	A	0.00	0.00	6.90	0.00	24.00
3100	3d AD	14-Jan-45	A	2.20	2.20	7.60	999.90	999.90
3101	3d Army	14-Jan-45	A	5.00	5.00	167.80	999.90	999.90
3102	3d Cav Gp	14-Jan-45	A	0.00	0.00	18.00	0.00	24.00
3103	4th ID	14-Jan-45	A	0.00	0.00	36.60	0.00	24.00
3104	51st ID	14-Jan-45	B	1.20	1.20	9.60	0.00	24.00
3105	53d ID	14-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3106	5th AD	14-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3107	5th ID	14-Jan-45	A	0.00	0.00	16.20	0.00	24.00
3108	6th AD	14-Jan-45	A	0.00	0.00	7.70	0.00	24.00
3109	6th AbnD	14-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3110	75th ID	14-Jan-45	A	2.50	2.50	15.70	3.00	21.00
3111	78th ID	14-Jan-45	A	0.00	0.00	14.10	0.00	24.00
3112	7th AD	14-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3113	80th ID	14-Jan-45	A	0.00	0.00	31.10	0.00	24.00
3114	82d AbnD	14-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3115	83d ID	14-Jan-45	A	2.00	2.00	8.00	999.90	999.90
3116	84th ID	14-Jan-45	A	5.80	5.80	13.80	999.90	999.90
3117	87th ID	14-Jan-45	A	4.20	0.00	20.50	0.00	24.00
3118	8th ID	14-Jan-45	A	0.00	0.00	17.10	0.00	24.00
3119	90th ID	14-Jan-45	A	2.10	2.10	4.50	999.90	999.90
3120	94th ID	14-Jan-45	A	1.00	1.00	42.70	999.90	999.90
3121	99th ID	14-Jan-45	A	0.00	0.00	4.30	0.00	24.00
3122	9th AD	14-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3123	9th Army	14-Jan-45	A	0.00	0.00	68.00	999.90	24.00
3124	9th ID	14-Jan-45	A	0.00	0.00	13.20	0.00	24.00
3125	Guards AD	14-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3126	III Corps	14-Jan-45	A	3.10	3.10	18.20	999.90	999.90
3127	V Corps	14-Jan-45	A	999.90	2.00	36.40	0.00	24.00
3128	VII Corps	14-Jan-45	A	4.30	4.30	25.00	999.90	999.90
3129	VIII Corps	14-Jan-45	A	4.00	4.00	36.90	999.90	999.90
3130	XII Corps	14-Jan-45	A	0.00	0.00	82.60	0.00	24.00
3131	XIII Corps	14-Jan-45	A	0.00	0.00	24.40	0.00	24.00
3132	XIX Corps	14-Jan-45	A	0.00	0.00	45.20	0.00	24.00
3133	XVIII Corps	14-Jan-45	A	4.10	4.10	29.30	999.90	999.90
3134	XX Corps	14-Jan-45	A	1.00	1.00	999.90	999.90	999.90
3135	XXX Corps	14-Jan-45	B	0.60	0.00	0.00	0.00	0.00
3136	10th SSPzD	14-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3137	116th PzD	14-Jan-45	G	2.50	-2.50	5.00	999.90	999.90
3138	11th PzD	14-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3139	12th SSPzD	14-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3140	12th VGD	14-Jan-45	G	2.00	-2.00	6.50	999.90	999.90
3141	15th Army	14-Jan-45	G	2.40	-2.40	94.30	999.90	999.90
3142	15th PzGD	14-Jan-45	G	0.00	0.00	0.00	999.90	999.90
3143	167th VGD	14-Jan-45	G	2.00	-2.00	3.00	999.90	999.90
3144	18th VGD	14-Jan-45	G	3.00	-3.00	13.00	999.90	999.90
3145	1st SSPzD	14-Jan-45	G	2.00	0.00	1.20	999.90	999.90
3146	212th VGD	14-Jan-45	G	0.00	0.00	35.00	0.00	24.00
3147	246th VGD	14-Jan-45	G	0.00	0.00	6.00	999.90	999.90
3148	28th VGD	14-Jan-45	G	3.50	-3.50	10.50	999.90	999.90

ACSD8 (SECTION 14-16 JAN 45)

PART 2 OF 5

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
3149	272d VGD	14-Jan-45	G	0.00	0.00	17.00	0.00	24.00
3150	276th VGD	14-Jan-45	G	0.00	0.00	7.00	999.90	999.90
3151	277th VGD	14-Jan-45	G	0.00	0.00	10.00	0.00	24.00
3152	27th SSPzGD	14-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3153	28th SSPzGD	14-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3154	2d PzD	14-Jan-45	G	0.00	0.00	0.00	999.90	999.90
3155	2d SSPzD	14-Jan-45	G	2.00	-2.00	5.50	999.90	999.90
3156	326th VGD	14-Jan-45	G	3.50	-3.50	6.00	999.90	999.90
3157	340th VGD	14-Jan-45	G	3.00	0.00	3.50	999.90	999.90
3158	352d VGD	14-Jan-45	G	0.00	0.00	10.00	0.00	24.00
3159	353d ID	14-Jan-45	G	0.00	0.00	9.50	999.90	999.90
3160	363d VGD	14-Jan-45	G	0.00	0.00	25.00	0.00	24.00
3161	3d FJD	14-Jan-45	G	2.00	-2.00	10.00	999.90	999.90
3162	3d PzGD	14-Jan-45	G	6.00	0.00	0.00	999.90	999.90
3163	560th VGD	14-Jan-45	G	6.00	0.00	0.00	999.90	999.90
3164	59th ID	14-Jan-45	G	0.00	0.00	11.50	0.00	24.00
3165	5th FJD	14-Jan-45	G	1.50	-1.50	4.50	999.90	999.90
3166	5th PzArmy	14-Jan-45	G	5.70	-5.70	43.70	999.90	999.90
3167	62d VGD	14-Jan-45	G	0.00	0.00	0.00	24.00	0.00
3168	6th PzArmy	14-Jan-45	G	3.50	3.50	44.30	999.90	999.90
3169	79th VGD	14-Jan-45	G	0.00	0.00	10.00	0.00	24.00
3170	7th Army	14-Jan-45	G	1.10	0.00	71.20	0.00	24.00
3171	85th ID	14-Jan-45	G	0.00	0.00	9.00	0.00	24.00
3172	89th ID	14-Jan-45	G	0.00	0.00	6.50	0.00	24.00
3173	9th PzD	14-Jan-45	G	0.00	0.00	3.50	999.90	999.90
3174	9th SSPzD	14-Jan-45	G	3.50	-3.50	9.50	999.90	999.90
3175	9th VGD	14-Jan-45	G	1.00	-1.00	4.00	999.90	999.90
3176	FBB	14-Jan-45	G	2.00	2.00	0.00	999.90	999.90
3177	FGB	14-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3178	II SSPzK	14-Jan-45	G	2.50	-2.50	5.50	999.90	999.90
3179	LIII K	14-Jan-45	G	1.10	0.00	22.90	0.00	24.00
3180	LVIII PzK	14-Jan-45	G	3.50	3.50	14.60	999.90	999.90
3181	LXVI K	14-Jan-45	G	2.50	-2.50	10.30	999.90	999.90
3182	LXVII K	14-Jan-45	G	2.40	-2.40	27.40	999.90	999.90
3183	LXXIV K	14-Jan-45	G	0.00	0.00	32.00	0.00	24.00
3184	LXXX K	14-Jan-45	G	0.00	0.00	54.60	0.00	24.00
3185	LXXXI K	14-Jan-45	G	0.00	0.00	36.00	0.00	24.00
3186	PzLehrD	14-Jan-45	G	4.00	-4.00	5.00	999.90	999.90
3187	XII SSK	14-Jan-45	G	0.00	0.00	11.50	0.00	24.00
3188	XIII K	14-Jan-45	G	3.50	-3.50	28.50	999.90	999.90
3189	XLVII PzK	14-Jan-45	G	4.00	-4.00	13.00	999.90	999.90
3190	101st AbnD	15-Jan-45	A	2.00	2.00	9.70	999.90	999.90
3191	102d ID	15-Jan-45	A	0.00	0.00	13.00	0.00	24.00
3192	104th ID	15-Jan-45	A	0.00	0.00	11.40	0.00	24.00
3193	106th ID	15-Jan-45	A	1.00	1.00	14.10	999.90	999.90
3194	11th AD	15-Jan-45	A	2.40	2.40	10.40	999.90	999.90
3195	17th AbnD	15-Jan-45	A	0.00	0.00	11.10	999.90	999.90
3196	1st Army	15-Jan-45	A	4.50	4.50	83.70	999.90	999.90
3197	1st ID	15-Jan-45	A	2.10	2.10	20.90	999.90	999.90
3198	26th ID	15-Jan-45	A	0.20	0.20	6.90	999.90	999.90
3199	28th ID	15-Jan-45	A	0.00	0.00	999.90	0.00	24.00
3200	29th Arm Bde	15-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3201	29th ID	15-Jan-45	A	0.00	0.00	8.00	0.00	24.00
3202	2d AD	15-Jan-45	A	3.70	3.70	6.30	999.90	999.90
3203	2d ID	15-Jan-45	A	0.00	0.00	2.40	0.00	24.00
3204	30th ID	15-Jan-45	A	2.50	2.50	30.40	999.90	999.90
3205	35th ID	15-Jan-45	A	0.00	0.00	6.90	0.00	24.00
3206	3d AD	15-Jan-45	A	1.20	1.20	7.50	999.90	999.90
3207	3d Army	15-Jan-45	A	3.40	3.40	156.50	999.90	999.90
3208	3d Cav Gp	15-Jan-45	A	0.00	0.00	18.00	0.00	24.00
3209	4th ID	15-Jan-45	A	0.00	0.00	36.60	0.00	24.00
3210	51st ID	15-Jan-45	B	0.00	0.00	11.70	0.00	24.00
3211	53d ID	15-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3212	5th AD	15-Jan-45	A	0.00	0.00	0.00	0.00	24.00

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
3213	5th ID	15-Jan-45	A	0.00	0.00	16.20	0.00	24.00
3214	6th AD	15-Jan-45	A	3.30	3.30	7.70	999.90	999.90
3215	6th AbnD	15-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3216	75th ID	15-Jan-45	A	4.50	4.50	14.90	999.90	999.90
3217	78th ID	15-Jan-45	A	0.00	0.00	14.10	0.00	24.00
3218	7th AD	15-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3219	80th ID	15-Jan-45	A	0.00	0.00	31.10	0.00	24.00
3220	82d AbnD	15-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3221	83d ID	15-Jan-45	A	0.00	0.00	5.30	999.90	999.90
3222	84th ID	15-Jan-45	A	3.20	3.20	16.40	999.90	999.90
3223	87th ID	15-Jan-45	A	0.00	0.00	8.20	0.00	24.00
3224	8th ID	15-Jan-45	A	0.00	0.00	17.10	0.00	24.00
3225	90th ID	15-Jan-45	A	1.00	1.00	2.20	999.90	999.90
3226	94th ID	15-Jan-45	A	1.00	1.00	42.80	999.90	999.90
3227	99th ID	15-Jan-45	A	0.00	0.00	4.30	0.00	24.00
3228	9th AD	15-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3229	9th Army	15-Jan-45	A	0.00	0.00	68.00	999.90	24.00
3230	9th ID	15-Jan-45	A	0.00	0.00	13.20	0.00	24.00
3231	Guards AD	15-Jan-45	B	0.00	0.00	0.00	0.00	0.00
3232	III Corps	15-Jan-45	A	3.40	3.40	19.50	999.90	999.90
3233	V Corps	15-Jan-45	A	2.10	2.10	36.40	999.90	999.90
3234	VII Corps	15-Jan-45	A	3.70	3.70	27.10	999.90	999.90
3235	VIII Corps	15-Jan-45	A	2.60	2.60	21.60	999.90	999.90
3236	XII Corps	15-Jan-45	A	0.00	0.00	82.60	0.00	24.00
3237	XIII Corps	15-Jan-45	A	0.00	0.00	24.40	0.00	24.00
3238	XIX Corps	15-Jan-45	A	0.00	0.00	45.20	0.00	24.00
3239	XVIII Corps	15-Jan-45	A	4.50	4.50	28.60	999.90	999.90
3240	XX Corps	15-Jan-45	A	1.00	1.00	999.90	999.90	999.90
3241	XXX Corps	15-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3242	10th SSPzD	15-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3243	116th PzD	15-Jan-45	G	12.50	-12.50	3.50	0.00	24.00
3244	11th PzD	15-Jan-45	G	4.00	0.00	0.00	0.00	24.00
3245	12th SSPzD	15-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3246	12th VGD	15-Jan-45	G	13.00	0.00	3.00	999.90	999.90
3247	15th Army	15-Jan-45	G	3.00	-3.00	94.30	999.90	999.90
3248	15th PzGD	15-Jan-45	G	0.00	0.00	0.00	999.90	999.90
3249	167th VGD	15-Jan-45	G	1.00	-1.00	4.50	999.90	999.90
3250	18th VGD	15-Jan-45	G	2.50	-2.50	11.00	999.90	999.90
3251	1st SSPzD	15-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3252	212th VGD	15-Jan-45	G	0.00	0.00	35.00	0.00	24.00
3253	246th VGD	15-Jan-45	G	0.00	0.00	6.00	999.90	999.90
3254	26th VGD	15-Jan-45	G	2.00	-2.00	7.50	999.90	999.90
3255	272d VGD	15-Jan-45	G	0.00	0.00	17.00	0.00	24.00
3256	276th VGD	15-Jan-45	G	0.00	0.00	7.00	999.90	999.90
3257	277th VGD	15-Jan-45	G	0.00	0.00	10.00	0.00	24.00
3258	27th SSPzGD	15-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3259	28th SSPzGD	15-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3260	2d PzD	15-Jan-45	G	0.00	0.00	0.00	999.90	999.90
3261	2d SSPzD	15-Jan-45	G	3.50	-3.50	4.50	999.90	999.90
3262	328th VGD	15-Jan-45	G	2.50	-2.50	6.50	999.90	999.90
3263	340th VGD	15-Jan-45	G	1.50	-1.50	4.00	999.90	999.90
3264	352d VGD	15-Jan-45	G	0.00	0.00	10.00	0.00	24.00
3265	353d ID	15-Jan-45	G	0.00	0.00	9.50	999.90	999.90
3266	363d VGD	15-Jan-45	G	0.00	0.00	25.00	0.00	24.00
3267	3d FJD	15-Jan-45	G	3.00	-3.00	11.50	999.90	999.90
3268	3d PzGD	15-Jan-45	G	3.50	-3.50	0.00	999.90	999.90
3269	560th VGD	15-Jan-45	G	6.00	0.00	0.00	999.90	999.90
3270	59th ID	15-Jan-45	G	0.00	0.00	11.50	0.00	24.00
3271	5th FJD	15-Jan-45	G	1.00	-1.00	2.00	999.90	999.90
3272	5th PzArmy	15-Jan-45	G	3.00	-3.00	25.90	999.90	999.90
3273	82d VGD	15-Jan-45	G	0.00	0.00	0.00	24.00	0.00
3274	8th PzArmy	15-Jan-45	G	12.50	-12.50	48.90	999.90	999.90
3275	79th VGD	15-Jan-45	G	0.00	0.00	10.00	0.00	24.00
3276	7th Army	15-Jan-45	G	0.00	0.00	71.30	0.00	24.00

ACSOB (SECTION 14-16 JAN 45)

PART 4 OF 5

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
3277	85th ID	15-Jan-45	G	0.00	0.00	9.00	0.00	24.00
3278	89th ID	15-Jan-45	G	0.00	0.00	6.50	0.00	24.00
3279	9th PzD	15-Jan-45	G	1.50	-1.50	3.50	999.90	999.90
3280	9th SSPzD	15-Jan-45	G	1.00	-1.00	8.00	999.90	999.90
3281	9th VGD	15-Jan-45	G	0.00	0.00	4.50	999.90	999.90
3282	F88	15-Jan-45	G	4.50	0.00	1.50	999.90	999.90
3283	FGB	15-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3284	II SSPzK	15-Jan-45	G	3.50	-3.50	9.00	999.90	999.90
3285	LIII K	15-Jan-45	G	0.00	0.00	23.00	0.00	24.00
3286	LVIII PzK	15-Jan-45	G	1.50	-1.50	14.60	999.90	999.90
3287	LXVI K	15-Jan-45	G	12.50	-12.50	3.60	999.90	999.90
3288	LXVII K	15-Jan-45	G	3.00	-3.00	28.20	999.90	999.90
3289	LXXIV K	15-Jan-45	G	0.00	0.00	32.00	0.00	24.00
3290	LXXX K	15-Jan-45	G	0.00	0.00	54.60	0.00	24.00
3291	LXXXI K	15-Jan-45	G	0.00	0.00	36.00	0.00	24.00
3292	PzLehrD	15-Jan-45	G	6.00	-6.00	5.00	999.90	999.90
3293	XII SSK	15-Jan-45	G	0.00	0.00	11.50	0.00	24.00
3294	XIII K	15-Jan-45	G	2.50	-2.50	25.50	999.90	999.90
3295	XLVII PzK	15-Jan-45	G	6.00	-6.00	13.30	999.90	999.90
3296	101st AbnD	16-Jan-45	A	2.00	2.00	11.70	999.90	999.90
3297	102d ID	16-Jan-45	A	0.00	0.00	13.00	0.00	24.00
3298	104th ID	16-Jan-45	A	0.00	0.00	11.40	0.00	24.00
3299	106th ID	16-Jan-45	A	1.50	1.50	8.90	999.90	999.90
3300	11th AD	16-Jan-45	A	5.80	5.80	10.80	999.90	999.90
3301	17th AbnD	16-Jan-45	A	0.00	0.00	16.70	0.00	24.00
3302	1st Army	16-Jan-45	A	3.70	3.70	86.80	999.90	999.90
3303	1st ID	16-Jan-45	A	2.60	2.60	21.80	999.90	999.90
3304	26th ID	16-Jan-45	A	0.00	0.00	7.00	0.00	24.00
3305	28th ID	16-Jan-45	A	0.00	0.00	999.90	0.00	24.00
3306	29th Arm Bde	16-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3307	29th ID	16-Jan-45	A	0.00	0.00	8.00	0.00	24.00
3308	2d AD	16-Jan-45	A	0.00	0.00	4.70	0.00	24.00
3309	2d ID	16-Jan-45	A	0.00	0.00	2.40	0.00	24.00
3310	30th ID	16-Jan-45	A	3.20	3.20	29.70	999.90	999.90
3311	35th ID	16-Jan-45	A	0.00	0.00	6.90	0.00	24.00
3312	3d AD	16-Jan-45	A	0.60	0.60	6.90	999.90	999.90
3313	3d Army	16-Jan-45	A	7.10	7.10	156.60	999.90	999.90
3314	3d Cav Gp	16-Jan-45	A	0.00	0.00	18.00	0.00	24.00
3315	4th ID	16-Jan-45	A	0.00	0.00	36.60	0.00	24.00
3316	51st ID	16-Jan-45	B	0.00	0.00	11.70	0.00	24.00
3317	53d ID	16-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3318	5th AD	16-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3319	5th ID	16-Jan-45	A	0.00	0.00	16.20	0.00	24.00
3320	6th AD	16-Jan-45	A	0.00	0.00	3.20	999.90	999.90
3321	6th AbnD	16-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3322	75th ID	16-Jan-45	A	1.70	1.70	9.90	999.90	999.90
3323	78th ID	16-Jan-45	A	0.00	0.00	14.10	0.00	24.00
3324	7th AD	16-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3325	80th ID	16-Jan-45	A	0.00	0.00	31.10	0.00	24.00
3326	82d AbnD	16-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3327	83d ID	16-Jan-45	A	0.00	0.00	4.40	999.90	999.90
3328	84th ID	16-Jan-45	A	0.00	0.00	17.20	0.00	24.00
3329	87th ID	16-Jan-45	A	0.00	0.00	8.20	0.00	24.00
3330	8th ID	16-Jan-45	A	0.00	0.00	17.10	0.00	24.00
3331	90th ID	16-Jan-45	A	1.70	1.70	4.00	999.90	999.90
3332	94th ID	16-Jan-45	A	0.00	0.00	42.90	999.90	24.00
3333	99th ID	16-Jan-45	A	0.00	0.00	4.30	0.00	24.00
3334	9th AD	16-Jan-45	A	0.00	0.00	0.00	0.00	24.00
3335	9th Army	16-Jan-45	A	0.00	0.00	68.00	999.90	24.00
3336	9th ID	16-Jan-45	A	0.00	0.00	13.20	0.00	24.00
3337	Guards AD	16-Jan-45	B	0.00	0.00	0.00	0.00	24.00
3338	III Corps	16-Jan-45	A	1.70	1.70	14.80	999.90	999.90
3339	V Corps	16-Jan-45	A	3.70	3.70	35.10	999.90	999.90
3340	VII Corps	16-Jan-45	A	0.00	0.00	26.70	999.90	999.90

SEQ NO	UNIT NAME	DATE	NATION	DISPLACE	DISTANCE OPPOSED ADVANCE	FRONT WIDTH	TIME IN COMBAT	TIME NO COMBAT
3341	VIII Corps	16-Jan-45	A	7.10	7.10	21.60	999.90	999.90
3342	XII Corps	16-Jan-45	A	0.00	0.00	82.60	0.00	24.00
3343	XIII Corps	16-Jan-45	A	0.00	0.00	24.40	0.00	24.00
3344	XIX Corps	16-Jan-45	A	0.00	0.00	45.20	0.00	24.00
3345	XVIII Corps	16-Jan-45	A	2.80	2.80	24.10	999.90	999.90
3346	XX Corps	16-Jan-45	A	0.00	0.00	999.90	0.00	24.00
3347	XXX Corps	16-Jan-45	B	0.00	0.00	999.90	0.00	24.00
3348	10th SSPzD	16-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3349	116th PzD	16-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3350	11th PzD	16-Jan-45	G	25.00	0.00	0.00	0.00	24.00
3351	12th SSPzD	16-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3352	12th VGD	16-Jan-45	G	0.00	0.00	0.00	999.90	999.90
3353	15th Army	16-Jan-45	G	3.00	-3.00	95.80	999.90	999.90
3354	15th PzGD	16-Jan-45	G	9.00	0.00	0.00	999.90	999.90
3355	167th VGD	16-Jan-45	G	0.00	0.00	4.00	999.90	999.90
3356	18th VGD	16-Jan-45	G	0.00	0.00	13.00	999.90	999.90
3357	1st SSPzD	16-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3358	212th VGD	16-Jan-45	G	0.00	0.00	35.00	0.00	24.00
3359	246th VGD	16-Jan-45	G	0.00	0.00	6.00	999.90	999.90
3360	26th VGD	16-Jan-45	G	3.50	-3.50	7.00	999.90	999.90
3361	272d VGD	16-Jan-45	G	0.00	0.00	17.00	0.00	24.00
3362	276th VGD	16-Jan-45	G	0.00	0.00	7.00	999.90	999.90
3363	277th VGD	16-Jan-45	G	0.00	0.00	10.00	0.00	24.00
3364	27th SSPzGD	16-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3365	28th SSPzGD	16-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3366	2d PzD	16-Jan-45	G	0.00	0.00	0.00	999.90	999.90
3367	2d SSPzD	16-Jan-45	G	0.00	0.00	6.00	999.90	999.90
3368	326th VGD	16-Jan-45	G	0.00	0.00	5.00	999.90	999.90
3369	340th VGD	16-Jan-45	G	1.50	-1.50	4.00	999.90	999.90
3370	352d VGD	16-Jan-45	G	0.00	0.00	10.00	0.00	24.00
3371	353d ID	16-Jan-45	G	0.00	0.00	9.50	999.90	999.90
3372	363d VGD	16-Jan-45	G	0.00	0.00	25.00	0.00	24.00
3373	3d FJD	16-Jan-45	G	3.00	-3.00	10.50	999.90	999.90
3374	3d PzGD	16-Jan-45	G	2.00	-2.00	2.50	999.90	999.90
3375	560th VGD	16-Jan-45	G	0.00	0.00	0.00	999.90	999.90
3376	59th ID	16-Jan-45	G	0.00	0.00	11.50	0.00	24.00
3377	5th FJD	16-Jan-45	G	0.00	0.00	2.00	999.90	999.90
3378	5th PzArmy	16-Jan-45	G	0.00	0.00	34.10	999.90	999.90
3379	62d VGD	16-Jan-45	G	0.00	0.00	0.00	24.00	0.00
3380	6th PzArmy	16-Jan-45	G	1.00	-1.00	35.90	999.90	999.90
3381	79th VGD	16-Jan-45	G	0.00	0.00	10.00	0.00	24.00
3382	7th Army	16-Jan-45	G	0.00	0.00	71.30	0.00	24.00
3383	85th ID	16-Jan-45	G	0.00	0.00	9.00	0.00	24.00
3384	89th ID	16-Jan-45	G	0.00	0.00	6.50	0.00	24.00
3385	9th PzD	16-Jan-45	G	4.00	-4.00	4.50	999.90	999.90
3386	9th SSPzD	16-Jan-45	G	1.00	-1.00	10.00	999.90	999.90
3387	9th VGD	16-Jan-45	G	0.00	0.00	4.50	999.90	999.90
3388	FBB	16-Jan-45	G	0.00	0.00	3.00	999.90	999.90
3389	FGB	16-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3390	II SSPzK	16-Jan-45	G	1.00	-1.00	6.00	999.90	999.90
3391	LIII K	16-Jan-45	G	0.00	0.00	23.00	0.00	24.00
3392	LVIII PzK	16-Jan-45	G	2.80	-2.80	15.80	999.90	999.90
3393	LXVI K	16-Jan-45	G	2.50	-2.50	2.80	999.90	999.90
3394	LXVII K	16-Jan-45	G	3.00	-3.00	30.70	999.90	999.90
3395	LXXIV K	16-Jan-45	G	0.00	0.00	32.00	0.00	24.00
3396	LXXX K	16-Jan-45	G	0.00	0.00	54.60	0.00	24.00
3397	LXXXI K	16-Jan-45	G	0.00	0.00	36.00	0.00	24.00
3398	PzLehrD	16-Jan-45	G	1.50	-1.50	6.50	999.90	999.90
3399	XII SSK	16-Jan-45	G	0.00	0.00	0.00	0.00	24.00
3400	XIII K	16-Jan-45	G	1.00	-1.00	28.00	999.90	999.90
3401	XLVII PzK	16-Jan-45	G	4.00	-4.00	12.00	999.90	999.90

ALEXANDE

1. Data Source:

a. Title: Alexander: A History of the Origin and Growth of the Art of War from the Earliest Times to the Battle of the Ipsus, BC 301, With a Detailed Account of the Campaigns of the Great Macedonian

b. Author: Dodge, Theodore Ayrault

c. Date: 1890 (1st edition), 1898 (2nd edition)

d. Organization: The Riverside Press, Cambridge (Houghton, Mifflin and Company, Boston and New York)

e. Number: NA

f. Available from: Publisher and libraries

2. Data Description:

a. Appendix A of the source tabulates distances and elapsed times for "Some Ancient Marches." This source table gives distances and times of march for some ancient marches, together with the year in which the march was made and the number and kind of troops participating in it. These are give in the first 19 rows of the data base.

b. Appendix C of the source gives a table of distances for the "Marches of Alexander." These are also given in our ALEXANDE data base.

3. Discussion and Comments:

a. All these advances apparently were but lightly opposed. The values can be compared to those in the ENGELS data base.

b. This is one of a series of volumes by Theodore Ayrault Dodge. See, for example, the data bases given elsewhere for CAESAR, GUSTAVUS, HANNIBAL, and NAPOLEON.

c. The ALEXANDE data base provides information only on forces that are lightly engaged.

d. Some of the subtotals in Dodge's table of "Marches of Alexander" appear to be in error. These errors very nearly cancel out, so Dodge's grand total is very nearly accurate.

4. Data Table Notes:

a. Note 1: "Some of the distances are taken from Colonel Chesney; some are from Kiepert's maps. Exact accuracy has not been aimed at, as the old roads and the location of many places are not known."

b. For 3 of his 19 notable marches, Dodge stated that the distance was "over" a certain figure. In our data base we indicated this by a "+" following the distance in miles.

ALEXANDE

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)(HOURS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT
1	Spartans	Sparta to Marathon	150	241.40	3	80.47	490 BC	490 BC	NA	Foot
2	Ten Thousand Greeks	Myriandrus to Thapsacus	230	370.15	12	30.85	401 BC	401 BC	NA	Foot
3	Ten Thousand Greeks	Retreat	4000	6437.38	215	29.94	400 BC	400 BC	NA	Foot
4	Macedonians	One-day Drill Marches	30	48.28	1	48.28	350 BC	350 BC	NA	Foot
5	Macedonians	Pellium to Thebes	300	482.80	14	34.49	355 BC	355 BC	NA	All Arms
6	Macedonians	Pella to Sestos	350	563.27	20	28.16	334 BC	334 BC	NA	All Arms
7	Macedonians	Phoenicia to Thapsacus	200 + 321.87	11	11	29.26	331 BC	331 BC	NA	All Arms
8	Macedonians	Pursuit at Arbela	70	112.65	1	112.65	331 BC	331 BC	NA	Horse
9	Macedonians	Uxians to Persian Gates	113	181.86	5	36.37	331 BC	331 BC	NA	All Arms
10	Macedonians	Persian Gates to Araxes	40	64.37	0.5	128.75	331 BC	331 BC	NA	Horse
11	Macedonians	Ecbatana to Rhagae	220 + 354.06	11	11	32.19	330 BC	330 BC	NA	All Arms
12	Macedonians	Pursuit of Darius	400	643.74	11	58.52	330 BC	330 BC	NA	Horse
13	Macedonians	Pursuit of Darius	175	281.64	4	70.41	330 BC	330 BC	NA	Foot
14	Macedonians	Pursuit of Darius	47	75.64	0.5	151.28	330 BC	330 BC	NA	Foot
15	Macedonians	Hecatompylos to Aria	500 + 804.67	20	20	40.23	330 BC	330 BC	NA	All Arms
16	Macedonians	To Arcacoana	75	120.70	2	60.35	330 BC	330 BC	NA	All Arms
17	Macedonians	Capture of Bessus	150	241.40	4	60.35	329 BC	329 BC	NA	All Arms
18	Macedonians	Jaxartes to Maracanda	170	273.59	3.5	78.17	329 BC	329 BC	NA	All Arms
19	Macedonians	Desert of Sandar	57	91.73	1	91.73	325 BC	325 BC	NA	All Arms
20	Macedonians	Marches of Alexander: Routes in Greece								
21	Macedonians	Pella to Corinth	240	386.24	NA	NA	NA	NA	NA	NA
22	Macedonians	Corinth to Pella	240	386.24	NA	NA	NA	NA	NA	NA
23	Macedonians	Pella to Danube	350	563.27	NA	NA	NA	NA	NA	NA
24	Macedonians	Peuce to Pelium	300	482.80	NA	NA	NA	NA	NA	NA
25	Macedonians	Pelium to Thebes	300	482.80	NA	NA	NA	NA	NA	NA
26	Macedonians	Thebes to Pella	180	289.68	NA	NA	NA	NA	NA	NA
		Pella to Hellespont	300	482.80	NA	NA	NA	NA	NA	NA
		Subtotal	1910	3073.85						
27	Macedonians	Routes in Asia Minor								
28	Macedonians	Hellespont to Granicus	50	80.47	NA	NA	NA	NA	NA	NA
29	Macedonians	Granicus to Sardis	180	289.68	NA	NA	NA	NA	NA	NA
30	Macedonians	Sardis to Smyrna and back	100	160.93	NA	NA	NA	NA	NA	NA
31	Macedonians	Sardis to Ephesus	50	80.47	NA	NA	NA	NA	NA	NA
32	Macedonians	Ephesus to Miletus	60	96.56	NA	NA	NA	NA	NA	NA
33	Macedonians	Miletus to Halicarnassus	60	96.56	NA	NA	NA	NA	NA	NA
34	Macedonians	Halicarnassus to Telmessus	160	257.50	NA	NA	NA	NA	NA	NA
35	Macedonians	Telmessus to Phaselis	160	257.50	NA	NA	NA	NA	NA	NA
36	Macedonians	Phaselis to Side	85	136.79	NA	NA	NA	NA	NA	NA
37	Macedonians	Side to Termessus	85	136.79	NA	NA	NA	NA	NA	NA
38	Macedonians	Termessus to Sagalassus	70	112.65	NA	NA	NA	NA	NA	NA
39	Macedonians	Sagalassus to Celaenae	60	96.56	NA	NA	NA	NA	NA	NA
40	Macedonians	Celaenae to Gordium	170	273.59	NA	NA	NA	NA	NA	NA
41	Macedonians	Gordium to Ancyra	80	128.75	NA	NA	NA	NA	NA	NA
42	Macedonians	Ancyra to Tarsus	320	514.99	NA	NA	NA	NA	NA	NA
		Tarsus to Rugged Cilicia and back	160	257.50	NA	NA	NA	NA	NA	NA

PART 2 OF 8

ALEXANDE

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (HOURS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT
43	Macedonians	Tarsus to Myriandrus	100	160.93	NA	NA	NA	NA	NA	NA	NA
44	Macedonians	Myriandrus to Issus	25	40.23	NA	NA	NA	NA	NA	NA	NA
	Subtotal		1975	3178.45							
45	Macedonians	Routes in Phoenicia									
46	Macedonians	Issus to Tyre	300	482.80	NA	NA	NA	NA	NA	NA	NA
47	Macedonians	To Sidon and Libanus Campaign	100	160.93	NA	NA	NA	NA	NA	NA	NA
48	Macedonians	Tyre and Jerusalem	120	193.12	NA	NA	NA	NA	NA	NA	NA
49	Macedonians	Jerusalem to Gaza	60	96.56	NA	NA	NA	NA	NA	NA	NA
	Subtotal		140	225.31	NA	NA	NA	NA	NA	NA	NA
			720	1158.73							
50	Macedonians	Routes in Egypt									
51	Macedonians	Pelusium to Memphis	120	193.12	NA	NA	NA	NA	NA	NA	NA
52	Macedonians	Memphis to Alexandria	156	241.40	NA	NA	NA	NA	NA	NA	NA
53	Macedonians	Around Lake Mareotis	120	193.12	NA	NA	NA	NA	NA	NA	NA
54	Macedonians	Alexandria to Paraetonium	140	225.31	NA	NA	NA	NA	NA	NA	NA
55	Macedonians	Paraetonium to Temple of Jupiter Ammon	170	273.59	NA	NA	NA	NA	NA	NA	NA
	Subtotal	Temple of Jupiter Ammon to Memphis	340	547.18	NA	NA	NA	NA	NA	NA	NA
			1040	1673.72							
56	Macedonians	Route: Egypt to Pursepolis									
57	Macedonians	Memphis to Gaza	260	418.43	NA	NA	NA	NA	NA	NA	NA
58	Macedonians	Gaza to Tyre	135	217.26	NA	NA	NA	NA	NA	NA	NA
59	Macedonians	Tyre to Thapsacus	380	611.55	NA	NA	NA	NA	NA	NA	NA
60	Macedonians	Thapsacus to Bezabde	290	466.71	NA	NA	NA	NA	NA	NA	NA
61	Macedonians	Bezabde to Arbela	125	201.17	NA	NA	NA	NA	NA	NA	NA
62	Macedonians	Arbela to Opis	180	289.68	NA	NA	NA	NA	NA	NA	NA
63	Macedonians	Opis to Babylon	90	144.84	NA	NA	NA	NA	NA	NA	NA
64	Macedonians	Babylon to Susa	230	370.15	NA	NA	NA	NA	NA	NA	NA
65	Macedonians	Susa to Uxian City	130	209.21	NA	NA	NA	NA	NA	NA	NA
66	Macedonians	Uxian City to Kal-eh-Sefid	190	305.78	NA	NA	NA	NA	NA	NA	NA
	Subtotal	Kal-eh-Sefid to Persepolis	85	136.79	NA	NA	NA	NA	NA	NA	NA
			2095	3371.58							
67	Macedonians	Routes in Media and Caspian Region									
68	Macedonians	Persepolis to Ecabatana	480	772.49	NA	NA	NA	NA	NA	NA	NA
69	Macedonians	Ecabatana to Caspian Gates	285	458.66	NA	NA	NA	NA	NA	NA	NA
70	Macedonians	Caspian Gates to Hecatompylos	215	346.01	NA	NA	NA	NA	NA	NA	NA
71	Macedonians	Hecatompylos to Zadracarta	115	185.07	NA	NA	NA	NA	NA	NA	NA
	Subtotal	Mardian Campaign	600	965.61	NA	NA	NA	NA	NA	NA	NA
			1695	2727.84							
72	Macedonians	Routes from Caspian to Caucasus									
73	Macedonians	Zadracarta to Susa	550	885.14	NA	NA	NA	NA	NA	NA	NA
74	Macedonians	Susa to Artacoana	130	209.21	NA	NA	NA	NA	NA	NA	NA
75	Macedonians	Artacoana to Prophanthasia	200	321.87	NA	NA	NA	NA	NA	NA	NA
76	Macedonians	Prophanthasia to Alexandria Arachotia	450	724.20	NA	NA	NA	NA	NA	NA	NA
	Subtotal	Alexandria Arachotia to Nicaea	200	321.87	NA	NA	NA	NA	NA	NA	NA
		Nicaea to Alexandria ad Caucasum	35	56.33	NA	NA	NA	NA	NA	NA	NA

ALEXANDE

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT
		Subtotal	1565	2518.62						
76	Macedonians	Routes in Bactria and Sogdiana	110	177.03	NA	NA	NA	NA	NA	NA
79	Macedonians	Alexandria ad Caucasum to Drapsaca	220	354.06	NA	NA	NA	NA	NA	NA
80	Macedonians	Drapsaca to Zariaspa	205	329.92	NA	NA	NA	NA	NA	NA
81	Macedonians	Zariaspa to Nautaca	120	193.12	NA	NA	NA	NA	NA	NA
82	Macedonians	Nautaca to Maracanda	170	273.59	NA	NA	NA	NA	NA	NA
83	Macedonians	Maracanda to Jaxartes	100	160.93	NA	NA	NA	NA	NA	NA
84	Macedonians	Scythian and Seven Cities Campaigns	170	273.59	NA	NA	NA	NA	NA	NA
85	Macedonians	Jaxartes to Maracanda	150	241.40	NA	NA	NA	NA	NA	NA
86	Macedonians	Polymetius Campaign	325	523.04	NA	NA	NA	NA	NA	NA
87	Macedonians	Maracanda to Zariaspa	450	724.20	NA	NA	NA	NA	NA	NA
88	Macedonians	Five Column Campaign	200	321.87	NA	NA	NA	NA	NA	NA
89	Macedonians	Final Campaign in Sogdiana	150	241.40	NA	NA	NA	NA	NA	NA
90	Macedonians	Xenippa Campaign	250	402.34	NA	NA	NA	NA	NA	NA
91	Macedonians	Rock of Sisimithres and back	700	1126.54	NA	NA	NA	NA	NA	NA
92	Macedonians	To Sogdian Rock and Rock of Chorienes	200	321.87	NA	NA	NA	NA	NA	NA
93	Macedonians	To Zariaspa	330	531.08	NA	NA	NA	NA	NA	NA
		To Alexandria ad Caucasum	3850	6195.97						
		Subtotal	35	56.33	NA	NA	NA	NA	NA	NA
94	Macedonians	Routes in Cophen County	400	643.74	NA	NA	NA	NA	NA	NA
95	Macedonians	Alexandria to Micea	100	160.93	NA	NA	NA	NA	NA	NA
96	Macedonians	Micea to Ora	75	120.70	NA	NA	NA	NA	NA	NA
97	Macedonians	Ora to Astes' Fort	180	289.68	NA	NA	NA	NA	NA	NA
98	Macedonians	Astes' Fort to Aornus	40	64.37	NA	NA	NA	NA	NA	NA
99	Macedonians	Aornus to Dyrta	175	281.64	NA	NA	NA	NA	NA	NA
100	Macedonians	Dyrta to Indus	1005	1617.39						
		Indus to bridge								
		Subtotal	50	80.47	NA	NA	NA	NA	NA	NA
101	Macedonians	Routes in Five Rivers Country	100	160.93	NA	NA	NA	NA	NA	NA
102	Macedonians	Indus to Taxila	30	48.28	NA	NA	NA	NA	NA	NA
103	Macedonians	Taxila to Hydaspes	170	273.59	NA	NA	NA	NA	NA	NA
104	Macedonians	Hydaspes manoeuvre	70	112.65	NA	NA	NA	NA	NA	NA
105	Macedonians	Hydaspes to Glaucians	60	96.56	NA	NA	NA	NA	NA	NA
106	Macedonians	Glaucians to Acesines Crossing	100	160.93	NA	NA	NA	NA	NA	NA
107	Macedonians	Acesines to Hydraotis and beyond	250	402.34	NA	NA	NA	NA	NA	NA
108	Macedonians	To Pimprama and Sangala	60	96.56	NA	NA	NA	NA	NA	NA
109	Macedonians	To Sopeithes' and Phegeus' Kingdoms	180	289.68	NA	NA	NA	NA	NA	NA
110	Macedonians	To Hyphasis	1070	1722.00						
		To Micaea								
		Subtotal	250	402.34	NA	NA	NA	NA	NA	NA
111	Macedonians	Routes on Indus	210	337.96	NA	NA	NA	NA	NA	NA
112	Macedonians	Micaea to confluence Indus and Acesines	800	1287.48	NA	NA	NA	NA	NA	NA
113	Macedonians	Mallian Campaign	1260	2027.77						
		Campaign and discoveries on Lower Indus								
		Subtotal								

PART 4 OF 8

ALEXANDE

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT
114	Macedonians	Indus to Arabis		85	136.79	NA	NA	NA	NA	NA	NA
115	Macedonians	Arabis to Paura		450	724.20	NA	NA	NA	NA	NA	NA
116	Macedonians	Paura to Pasargadae		400	643.74	NA	NA	NA	NA	NA	NA
117	Macedonians	Pasargadae to Susa		420	675.92	NA	NA	NA	NA	NA	NA
		Subtotal		1355	2180.66						
		Final Routes									
118	Macedonians	Susa to sea		220	354.06	NA	NA	NA	NA	NA	NA
119	Macedonians	Sea to Opis		450	724.20	NA	NA	NA	NA	NA	NA
120	Macedonians	Opis to Ecbatana		330	531.08	NA	NA	NA	NA	NA	NA
121	Macedonians	Cossean Campaign and to Susa		400	643.74	NA	NA	NA	NA	NA	NA
122	Macedonians	Susa to Babylon		230	370.15	NA	NA	NA	NA	NA	NA
123	Macedonians	Babylon to sea		350	563.27	NA	NA	NA	NA	NA	NA
124	Macedonians	Back to Babylon		350	563.27	NA	NA	NA	NA	NA	NA
		Subtotal		2330	3749.77						
		Total (miles) of Alexander's Campaigns		21870							

ALEXANDE

NO.	OPERATION NAME/PHASE	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
1	Spartans	NA	NA	NA	NA	
2	Ten Thousand Greeks	NA	NA	NA	NA	
3	Ten Thousand Greeks	NA	NA	NA	NA	
4	Macedonians	NA	NA	NA	NA	
5	Macedonians	Mountain	NA	NA	NA	Mountain road
6	Macedonians	NA	NA	NA	NA	
7	Macedonians	NA	NA	NA	NA	
8	Macedonians	NA	NA	NA	NA	
9	Macedonians	Mountain	NA	NA	NA	Bad mountain road
10	Macedonians	NA	NA	NA	NA	
11	Macedonians	NA	NA	NA	NA	
12	Macedonians	NA	Desert	Sandy	NA	Hot sandy road, part desert
13	Macedonians	NA	Desert	Sandy	NA	Hot sandy road, part desert
14	Macedonians	NA	Desert	NA	NA	Desert
15	Macedonians	NA	NA	NA	NA	
16	Macedonians	NA	NA	NA	NA	
17	Macedonians	NA	NA	NA	NA	Ptolemy's march
18	Macedonians	NA	NA	NA	NA	
19	Macedonians	NA	Desert	NA	NA	Desert See Note
20	Macedonians	NA	NA	NA	NA	NA
21	Macedonians	NA	NA	NA	NA	NA
22	Macedonians	NA	NA	NA	NA	NA
23	Macedonians	NA	NA	NA	NA	NA
24	Macedonians	NA	NA	NA	NA	NA
25	Macedonians	NA	NA	NA	NA	NA
26	Macedonians	NA	NA	NA	NA	NA
27	Macedonians	NA	NA	NA	NA	NA
28	Macedonians	NA	NA	NA	NA	NA
29	Macedonians	NA	NA	NA	NA	NA
30	Macedonians	NA	NA	NA	NA	NA
31	Macedonians	NA	NA	NA	NA	NA
32	Macedonians	NA	NA	NA	NA	NA
33	Macedonians	NA	NA	NA	NA	NA
34	Macedonians	NA	NA	NA	NA	NA
35	Macedonians	NA	NA	NA	NA	NA
36	Macedonians	NA	NA	NA	NA	NA
37	Macedonians	NA	NA	NA	NA	NA
38	Macedonians	NA	NA	NA	NA	NA
39	Macedonians	NA	NA	NA	NA	NA
40	Macedonians	NA	NA	NA	NA	NA
41	Macedonians	NA	NA	NA	NA	NA
42	Macedonians	NA	NA	NA	NA	NA

ALEXANDE

NO.	OPERATION NAME/PHASE	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
43	Macedonians	NA	NA	NA	NA	NA
44	Macedonians	NA	NA	NA	NA	NA
45	Macedonians	NA	NA	NA	NA	NA
46	Macedonians	NA	NA	NA	NA	NA
47	Macedonians	NA	NA	NA	NA	NA
48	Macedonians	NA	NA	NA	NA	NA
49	Macedonians	NA	NA	NA	NA	NA
50	Macedonians	NA	NA	NA	NA	NA
51	Macedonians	NA	NA	NA	NA	NA
52	Macedonians	NA	NA	NA	NA	NA
53	Macedonians	NA	NA	NA	NA	NA
54	Macedonians	NA	NA	NA	NA	NA
55	Macedonians	NA	NA	NA	NA	NA
56	Macedonians	NA	NA	NA	NA	NA
57	Macedonians	NA	NA	NA	NA	NA
58	Macedonians	NA	NA	NA	NA	NA
59	Macedonians	NA	NA	NA	NA	NA
60	Macedonians	NA	NA	NA	NA	NA
61	Macedonians	NA	NA	NA	NA	NA
62	Macedonians	NA	NA	NA	NA	NA
63	Macedonians	NA	NA	NA	NA	NA
64	Macedonians	NA	NA	NA	NA	NA
65	Macedonians	NA	NA	NA	NA	NA
66	Macedonians	NA	NA	NA	NA	NA
67	Macedonians	NA	NA	NA	NA	NA
68	Macedonians	NA	NA	NA	NA	NA
69	Macedonians	NA	NA	NA	NA	NA
70	Macedonians	NA	NA	NA	NA	NA
71	Macedonians	NA	NA	NA	NA	NA
72	Macedonians	NA	NA	NA	NA	NA
73	Macedonians	NA	NA	NA	NA	NA
74	Macedonians	NA	NA	NA	NA	NA
75	Macedonians	NA	NA	NA	NA	NA
76	Macedonians	NA	NA	NA	NA	NA
77	Macedonians	NA	NA	NA	NA	NA

ALEXANDE

NO.	OPERATION NAME/PHASE	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
78	Macedonians	NA	NA	NA	NA	NA
79	Macedonians	NA	NA	NA	NA	NA
80	Macedonians	NA	NA	NA	NA	NA
81	Macedonians	NA	NA	NA	NA	NA
82	Macedonians	NA	NA	NA	NA	NA
83	Macedonians	NA	NA	NA	NA	NA
84	Macedonians	NA	NA	NA	NA	NA
85	Macedonians	NA	NA	NA	NA	NA
86	Macedonians	NA	NA	NA	NA	NA
87	Macedonians	NA	NA	NA	NA	NA
88	Macedonians	NA	NA	NA	NA	NA
89	Macedonians	NA	NA	NA	NA	NA
90	Macedonians	NA	NA	NA	NA	NA
91	Macedonians	NA	NA	NA	NA	NA
92	Macedonians	NA	NA	NA	NA	NA
93	Macedonians	NA	NA	NA	NA	NA
94	Macedonians	NA	NA	NA	NA	NA
95	Macedonians	NA	NA	NA	NA	NA
96	Macedonians	NA	NA	NA	NA	NA
97	Macedonians	NA	NA	NA	NA	NA
98	Macedonians	NA	NA	NA	NA	NA
99	Macedonians	NA	NA	NA	NA	NA
100	Macedonians	NA	NA	NA	NA	NA
101	Macedonians	NA	NA	NA	NA	NA
102	Macedonians	NA	NA	NA	NA	NA
103	Macedonians	NA	NA	NA	NA	NA
104	Macedonians	NA	NA	NA	NA	NA
105	Macedonians	NA	NA	NA	NA	NA
106	Macedonians	NA	NA	NA	NA	NA
107	Macedonians	NA	NA	NA	NA	NA
108	Macedonians	NA	NA	NA	NA	NA
109	Macedonians	NA	NA	NA	NA	NA
110	Macedonians	NA	NA	NA	NA	NA
111	Macedonians	NA	NA	NA	NA	NA
112	Macedonians	NA	NA	NA	NA	NA
113	Macedonians	NA	NA	NA	NA	NA

ALEXANDE

NO.	OPERATION NAME/PHASE	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
114	Macedonians	NA	NA	NA	NA	NA
115	Macedonians	NA	NA	NA	NA	NA
116	Macedonians	NA	NA	NA	NA	NA
117	Macedonians	NA	NA	NA	NA	NA
118	Macedonians	NA	NA	NA	NA	NA
119	Macedonians	NA	NA	NA	NA	NA
120	Macedonians	NA	NA	NA	NA	NA
121	Macedonians	NA	NA	NA	NA	NA
122	Macedonians	NA	NA	NA	NA	NA
123	Macedonians	NA	NA	NA	NA	NA
124	Macedonians	NA	NA	NA	NA	NA

ANDREWS

1. Data Source:

- a. Title: Rates of Advance in Land Attack Against Unprepared Forces
- b. Author: Andrews, Marshall
- c. Date: August 1960
- d. Organization: Operations Research Office, 6935 Arlington Road, Bethesda, MD
- e. Number: Technical Paper ORO-TP-10
- f. Available from: DTIC AD-243 938

2. Data Description:

a. The ANDREWS data are taken from Tables 1 and 2 of the source. Andrews in turn used Esposito, Vincent J. (ed.), "The West Point Atlas of American Wars," 2 vols, Praeger, New York, 1959 as a source of advance distances and durations for all of the cases he investigated.

b. Andrews presents data on the 14 advances listed below. The first three of these advances were made by infantry on foot supported by horse-drawn artillery and screened by horse cavalry. The others were carried out either with substantial armored support or as predominantly armored operations. Andrews' goal was not to derive an absolute number applicable to a specific situation or type of operation, but to obtain an average applicable for planning purposes to any of a number of comparable instances sharing the common characteristic of a massive attack by fully prepared forces against a relatively unprepared opponent. In each case the criterion for distance advanced was attainment of the objective or cessation of the advance due to defensive action, whether by the opponent or by other factors.

List of the Fourteen Campaigns Studied by Andrews

Case no.	Short name	Description
1	Sherman	Sherman's march from Atlanta to Savannah, Georgia
2	Kluck	German invasion of Belgium and France, August-September 1914
3	Caporetto	Austro-German advance from Caporetto, November 1917
4	Kleist	German invasion of Holland, Belgium and France, May 1940
5	4th Army	Advance of the German 4th Army from the Somme, June 1940
6	Yugoslavia & Greece	German invasion of Yugoslavia and Greece, April 1941
7	Russia	German invasion of Russia, June-December 1941
8	Malaya	Japanese advance through Malaya to Singapore, 1941-1942
9	North Korea	North Korean invasion of South Korea, June-August 1950
10	Wavell	British advance from Sidi Barrani to Beda Fomm, North Africa, December 1940-February 1941
11	Rommel I	German advance from El Agheila to Salum, North Africa, March-May 1941
12	Auchinleck	British advance from Salum to El Agheila, North Africa, November-December 1941
13	Rommel II	German advance from El Agheila to El Alamein, North Africa, January-July 1942
14	Montgomery	British advance from El Alamein to the Mareth Line, North Africa, October 1942 to January 1943

c. Andrews defines his distances as the distance between the phase lines shown in "The West Point Atlas of American Wars," and explains (pp 8-9) that "These results do not, nor could they, take into consideration actual road miles covered by major or subordinate units. Distances used are in terms of distance covered over stated periods. ... No attempt has been made to include vertical distance in the total miles traveled. ... In each case selected the criterion for distances advanced was attainment of the objective or cessation of the advance. It was not considered whether fractions of the command charged with the operation, or the entire force, had closed up on the objective so long as the objective itself was realized. On the other hand, penetrations by small subordinate units, such as reconnaissance elements, beyond the final phase line were disregarded."

3. Discussion and Comments:

a. As its title indicates, this is a study of rates of advance by forces that are but lightly engaged. I suspect that earlier on, various staff studies may have collected similar data and made some sort of informal or even statistical analysis of it—witness the fairly definite march rate examples Clausewitz put forward (Clausewitz, 1832), but Andrews' study is the first systematic effort that has come to my attention.

b. I have not always been able to reconcile the times quoted by Andrews with the dates he gives. Several of Andrews' advance rates are not accurate to the number of significant figures shown in his tables. For example, Andrews' entry of 3.00 for the rate of advance in Caporetto—Phase 2 is surely a misprint and should read 3.60 miles/day. Some other values are good only to "slide rule accuracy," i.e., to two or three significant figures.

c. We did not attempt to determine whether Andrews' distances and durations accurately represent the maps in the West Point Atlas of American Wars.

d. Andrews gives a third table (his Table 3, entitled Rates of Advance in Mountain Terrain), but it merely duplicates the entries for Yugoslavia, Greece, and North Korea in his Table 1.

4. Data Table Notes:

a. Andrews does not give information on the intensity of opposition, the topography, vegetation, or footing. I have supplied the values shown for these items, but they are little better than guesses on my part and should not to be taken too seriously unless confirmed by more authoritative sources. This is an exception to the general rule that I do not supply information not actually given by the source.

b. The entries in the data base column headed "Notes" gives the specific table in the source from which the entry was taken.

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	SHERMAN/1	ATLANTA TO SAVANNAH, GA	79	127.14	7	7	18.16	1864		LITE	FOOT	ROLLING
2	SHERMAN/2	ATLANTA TO SAVANNAH, GA	25	40.23	5	5	8.05			LITE	FOOT	ROLLING
3	SHERMAN/3	ATLANTA TO SAVANNAH, GA	52	83.69	6	6	13.95			LITE	FOOT	ROLLING
4	SHERMAN/4	ATLANTA TO SAVANNAH, GA	69	111.04	7	7	15.86		1864	LITE	FOOT	ROLLING
5	KLUCK/1	BELGIUM & FRANCE	38	61.16	14	14	4.37	AUG 1914		LITE	FOOT	FLAT
6	KLUCK/2	BELGIUM & FRANCE	66	106.22	6	6	17.70			LITE	FOOT	FLAT
7	KLUCK/3	BELGIUM & FRANCE	78	125.53	7	7	17.93			LITE	FOOT	FLAT
8	KLUCK/4	BELGIUM & FRANCE	88	141.62	7	7	20.23		SEP 1914	LITE	FOOT	FLAT
9	CAPORETTO/1	ITALY	28	45.06	8	8	5.63	NOV 1917		LITE	FOOT	MOUNTAIN
10	CAPORETTO/2	ITALY	18	28.97	5	5	5.79			LITE	FOOT	MOUNTAIN
11	CAPORETTO/3	ITALY	4	6.44	4	4	1.61			LITE	FOOT	MOUNTAIN
12	CAPORETTO/4	ITALY	26	41.84	2	2	20.92		NOV 1917	LITE	FOOT	MOUNTAIN
13	KLEIST/1	HOLLAND, BELGIUM, FRANCE	43	69.20	4	4	17.30	MAY 1940		LITE	MOTOR	FLAT
14	KLEIST/2	HOLLAND, BELGIUM, FRANCE	72	115.87	4	4	28.97			LITE	MOTOR	FLAT
15	KLEIST/3	HOLLAND, BELGIUM, FRANCE	103	165.76	5	5	33.15			LITE	MOTOR	FLAT
16	KLEIST/4	HOLLAND, BELGIUM, FRANCE	61	98.17	3	3	32.72		MAY 1940	LITE	MOTOR	FLAT
17	4-TH ARMY/1	SOMME TO SPAIN	70	112.65	8	8	14.08	JUN 1940		LITE	MOTOR	ROLLING
18	4-TH ARMY/2	SOMME TO SPAIN	110	177.03	5	5	35.41			LITE	MOTOR	ROLLING
19	4-TH ARMY/3	SOMME TO SPAIN	55	88.51	2	2	44.26			LITE	MOTOR	ROLLING
20	4-TH ARMY/4	SOMME TO SPAIN	105	168.98	6	6	28.16		JUN 1940	LITE	MOTOR	ROLLING
21	YUGOSLAVIA AND GREECE/1	GERMAN INVASION OF GREECE/1	80	128.75	3	3	42.92	APR 1941		LITE	MOTOR	MOUNTAIN
22	YUGOSLAVIA AND GREECE/2	GERMAN INVASION OF GREECE/2	112	180.25	5	5	36.05			LITE	MOTOR	MOUNTAIN
23	YUGOSLAVIA AND GREECE/3	GERMAN INVASION OF GREECE/3	45	72.42	11	11	6.58			LITE	MOTOR	MOUNTAIN
24	YUGOSLAVIA AND GREECE/4	GERMAN INVASION OF GREECE/4	57	91.73	7	7	13.10		APR 1941	LITE	MOTOR	MOUNTAIN
25	RUSSIA/1	OPERATION BARBAROSSA	182	292.90	8	8	36.61	JUN 1941		LITE	MOTOR	ROLLING
26	RUSSIA/2	OPERATION BARBAROSSA	128	206.00	12	12	17.17			LITE	MOTOR	ROLLING
27	RUSSIA/3	OPERATION BARBAROSSA	50	80.47	5	5	16.09			LITE	MOTOR	ROLLING
28	RUSSIA/4	OPERATION BARBAROSSA	28	45.06	10	10	4.51			LITE	MOTOR	ROLLING
29	MALAYA/1	MALAYA TO SINGAPORE	163	262.32	18	18	14.57	1941		LITE	MOTOR	ROLLING
30	MALAYA/2	MALAYA TO SINGAPORE	47	75.64	5	5	15.13			LITE	MOTOR	ROLLING
31	MALAYA/3	MALAYA TO SINGAPORE	165	265.54	19	19	13.98			LITE	MOTOR	ROLLING
32	MALAYA/4	MALAYA TO SINGAPORE	80	128.75	13	13	9.90		1942	LITE	MOTOR	ROLLING
33	NORTH KOREA/1	INVASION OF SOUTH KOREA	80	128.75	11	11	11.70	JUN 1950		LITE	MOTOR	MOUNTAIN
34	NORTH KOREA/2	INVASION OF SOUTH KOREA	40	64.37	5	5	12.87			LITE	MOTOR	MOUNTAIN
35	NORTH KOREA/3	INVASION OF SOUTH KOREA	60	96.56	14	14	6.90			LITE	MOTOR	MOUNTAIN
36	NORTH KOREA/4	INVASION OF SOUTH KOREA	80	128.75	7	7	18.39		AUG 1950	LITE	MOTOR	MOUNTAIN
37	WAVELL/1	EGYPT, LIBYA & CYRENAICA	75	120.70	7	7	17.24	DEC 1940		LITE	MOTOR	MOUNTAIN
38	WAVELL/2	EGYPT, LIBYA & CYRENAICA	15	24.14	20	20	1.21			LITE	MOTOR	MIXED
39	WAVELL/3	EGYPT, LIBYA & CYRENAICA	65	104.61	17	17	6.15			LITE	MOTOR	MIXED
40	WAVELL/4	EGYPT, LIBYA & CYRENAICA	240	386.24	14	14	27.59		FEB 1941	LITE	MOTOR	MIXED
41	ROMMEL 1/1	EGYPT, LIBYA & CYRENAICA	230	370.15	12	12	30.85	MAR 1941		LITE	MOTOR	MIXED
42	ROMMEL 1/2	EGYPT, LIBYA & CYRENAICA	95	152.89	9	9	16.99			LITE	MOTOR	MIXED
43	ROMMEL 1/3	EGYPT, LIBYA & CYRENAICA	105	168.98	46	46	3.67		MAY 1941	LITE	MOTOR	MIXED
44	AUCHINLECK/1	EGYPT, LIBYA & CYRENAICA	65	104.61	16	16	6.54	NOV 1941		LITE	MOTOR	MIXED
45	AUCHINLECK/2	EGYPT, LIBYA & CYRENAICA	70	112.65	11	11	10.24			LITE	MOTOR	MIXED
46	AUCHINLECK/3	EGYPT, LIBYA & CYRENAICA	215	346.01	5	5	69.20			LITE	MOTOR	MIXED

ANDREWS

PART 2 OF 4

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
47	AUCHINLECK/4	EGYPT, LIBYA & CYRENAICA	55	88.51	6	6	14.75		DEC 1941	LITE	MOTOR	MIXED
48	ROMMEL 11/1	EGYPT, LIBYA & CYRENAICA	360	579.36	20	20	28.97	JAN 1942		LITE	MOTOR	MIXED
49	ROMMEL 11/2	EGYPT, LIBYA & CYRENAICA	0	0.00	109	109	0.00			LITE	MOTOR	MIXED
50	ROMMEL 11/3	EGYPT, LIBYA & CYRENAICA	38	61.16	26	26	2.35			LITE	MOTOR	MIXED
51	ROMMEL 11/4	EGYPT, LIBYA & CYRENAICA	290	466.71	9	9	51.86		JUL 1942	LITE	MOTOR	MIXED
52	MONTGOMERY/1	EGYPT, LIBYA & CYRENAICA	238	383.02	22	22	17.41	NOV 1942		LITE	MOTOR	MIXED
53	MONTGOMERY/2	EGYPT, LIBYA & CYRENAICA	310	498.90	8	8	62.36			LITE	MOTOR	MIXED
54	MONTGOMERY/3	EGYPT, LIBYA & CYRENAICA	270	434.52	35	35	12.41			LITE	MOTOR	MIXED
55	MONTGOMERY/4	EGYPT, LIBYA & CYRENAICA	202	325.09	29	29	11.21		FEB 1943	LITE	MOTOR	MIXED

ANDREWS

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES
1	SHERMAN/1	WOODED	FIRM	ARMY	TABLE I
2	SHERMAN/2	WOODED	FIRM	ARMY	TABLE I
3	SHERMAN/3	WOODED	FIRM	ARMY	TABLE I
4	SHERMAN/4	WOODED	FIRM	ARMY	TABLE I
5	KLUCK/1	MIXED	FIRM	ARMY	TABLE I
6	KLUCK/2	MIXED	FIRM	ARMY	TABLE I
7	KLUCK/3	MIXED	FIRM	ARMY	TABLE I
8	KLUCK/4	MIXED	FIRM	ARMY	TABLE I
9	CAPORETTO/1	WOODED	FIRM	ARMY	TABLE I
10	CAPORETTO/2	WOODED	FIRM	ARMY	TABLE I
11	CAPORETTO/3	WOODED	FIRM	ARMY	TABLE I
12	CAPORETTO/4	WOODED	FIRM	ARMY	TABLE I
13	KLEIST/1	MIXED	FIRM	ARMY	TABLE I
14	KLEIST/2	MIXED	FIRM	ARMY	TABLE I
15	KLEIST/3	MIXED	FIRM	ARMY	TABLE I
16	KLEIST/4	MIXED	FIRM	ARMY	TABLE I
17	4-TH ARMY/1	MIXED	FIRM	ARMY	TABLE I
18	4-TH ARMY/2	MIXED	FIRM	ARMY	TABLE I
19	4-TH ARMY/3	MIXED	FIRM	ARMY	TABLE I
20	4-TH ARMY/4	MIXED	FIRM	ARMY	TABLE I
21	YUGOSLAVIA AND GREECE/1	MIXED	FIRM	CORPS	TABLE I
22	YUGOSLAVIA AND GREECE/2	MIXED	FIRM	CORPS	TABLE I
23	YUGOSLAVIA AND GREECE/3	MIXED	FIRM	CORPS	TABLE I
24	YUGOSLAVIA AND GREECE/4	MIXED	FIRM	CORPS	TABLE I
25	RUSSIA/1	PRAIRIE	FIRM	ARMY	TABLE I
26	RUSSIA/2	PRAIRIE	FIRM	ARMY	TABLE I
27	RUSSIA/3	PRAIRIE	FIRM	ARMY	TABLE I
28	RUSSIA/4	PRAIRIE	FIRM	ARMY	TABLE I
29	MALAYA/1	WOODED	MIXED	CORPS	TABLE I
30	MALAYA/2	WOODED	MIXED	CORPS	TABLE I
31	MALAYA/3	WOODED	MIXED	CORPS	TABLE I
32	MALAYA/4	WOODED	MIXED	CORPS	TABLE I
33	NORTH KOREA/1	WOODED	FIRM	ARMY	TABLE I
34	NORTH KOREA/2	WOODED	FIRM	ARMY	TABLE I
35	NORTH KOREA/3	WOODED	FIRM	ARMY	TABLE I
36	NORTH KOREA/4	WOODED	FIRM	ARMY	TABLE I
37	WAVELL/1	DESERT	MIXED	CORPS	TABLE II
38	WAVELL/2	DESERT	MIXED	CORPS	TABLE II
39	WAVELL/3	DESERT	MIXED	CORPS	TABLE II
40	WAVELL/4	DESERT	MIXED	CORPS	TABLE II
41	ROMMEL 1/1	DESERT	MIXED	CORPS	TABLE II
42	ROMMEL 1/2	DESERT	MIXED	CORPS	TABLE II
43	ROMMEL 1/3	DESERT	MIXED	CORPS	TABLE II
44	AUCHINLECK/1	DESERT	MIXED	CORPS	TABLE II
45	AUCHINLECK/2	DESERT	MIXED	CORPS	TABLE II

ANDREWS

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES
46	AUCHINCLECK/3	DESERT	MIXED	CORPS	TABLE II
47	AUCHINCLECK/4	DESERT	MIXED	CORPS	TABLE II
48	ROMMEL II/1	DESERT	MIXED	CORPS	TABLE II
49	ROMMEL II/2	DESERT	MIXED	CORPS	TABLE II
50	ROMMEL II/3	DESERT	MIXED	CORPS	TABLE II
51	ROMMEL II/4	DESERT	MIXED	CORPS	TABLE II
52	MONTGOMERY/1	DESERT	MIXED	CORPS	TABLE II
53	MONTGOMERY/2	DESERT	MIXED	CORPS	TABLE II
54	MONTGOMERY/3	DESERT	MIXED	CORPS	TABLE II
55	MONTGOMERY/4	DESERT	MIXED	CORPS	TABLE II

BAORG

1. Data Source:

- a. Title: An Analysis of Infantry Rates of Advance in Battle
- b. Author: Gould, A. H., and H. Gee
- c. Date: November 1952
- d. Organization: British Army Operational Research Group, Department of the Scientific Adviser to the Army Council
- e. Number: Report No. 17/52
- f. Available from: Defense Operational Analysis Establishment, United Kingdom

2. Data Description:

a. The source gives the advance distances and times of 331 small unit infantry engagements in World War II. Of these, 164 are from Italy during the months of January, June, July and October 1944; the remaining 167 are from Northwest Europe during the months of January to March 1945. They were gathered to determine the feasibility of quoting a figure representative of "the average rate of infantry advance," at the same time assessing the influence of a number of operational variables on (a) the rate of advance and (b) the associated casualties per company.

b. The units involved ranged in size from one to four companies of infantry supported by various levels of artillery, tanks and other armored vehicles, and air as part of a combined arms operation. They are distributed as follows:

<u>No. of infantry cos. involved</u>	<u>No. of actions</u>
1	56
2	74
3	194
4	1
<u>Total</u>	<u>331</u>

c. The following data are given:

- (1) "Strength of our own troops in terms of numbers of companies in attack."
- (2) "Distance in yards covered by infantry on foot in the advance from start line to objective."
- (3) "Time taken from crossing the start line to the leading troops reaching the objective."
- (4) "Type of country typified by the Theatres of War, i.e., Northwest Europe or Italy, these being representative of relatively flat and mountainous going respectively." The source also indicates the general area involved (e.g., Holland, Reichwald Area, Cleve, etc.).
- (5) "Within each area [i.e., Theatre of War], [type of terrain] by the local nature of the country, defined as open, close (i.e., wooded) or built-up."
- (6) "Advance by day or night."
- (7) "Number of casualties suffered by own troops."

(8) "Although in many actions some statement of the fire support was made, in general the description lacked precision, such statements as "RA" or "Tanks" being the sole description. It was considered impractical to give measure to such general statements and consequently this factor has not been incorporated into the analysis." However, the source notes when such statements were given in the War Diaries.

(9) "Similarly the strength of enemy opposition has been classified under only two headings, heavy and slight, again without allowance being made for the variations within these headings. No detail was available as to the support arms used by the enemy."

d. The source notes that it was not considered feasible to obtain usable information on such factors as:

- (1) Influence of prearranged plan.
- (2) Weather conditions prevailing at the time of the action.
- (3) Training and battle experience of the troops.
- (4) Amount and duration of fire support.
- (5) Extent and value of previous reconnaissance.

(6) The source also notes that "No detail was available as to the support arms used by the enemy."

3. Discussion and Comments:

a. This is an excellent study, clearly and concisely reported. The data seem to be exceptionally carefully compiled. BAORG has a high reputation in the military operational analysis community for the accuracy and conscientiousness of their wartime data collection work. This appears to be the earliest study that attempts in a systematic way to assess quantitatively the influence of various factors upon rates of advance in land combat, or to employ modern statistical techniques to analyze the data.

b. (p 3) "It was not possible, of course, to estimate to what degree the rates of advance which were studied were conditioned by previous planning. This element would be particularly important in timed operations employing two or three companies."

c. (p 3) "Whilst it is reasonable to assume that [the prevailing weather conditions] may materially affect the course of the action, this factor had to be neglected as, in the majority of instances, no precise statement of weather conditions was available."

d. (p 3) "[Training and battle experience of the troops], which applies not only to our forces but also to the enemy forces opposing the advance, is again neglected for reasons similar to those stated above in respect of [weather conditions]."

e. (p 3) "[Extent and value of previous reconnaissance] is again neglected for the reasons applicable to [weather and training]."

f. The extent to which the War Diary entries suffered from a potential vicious circle is not known. The vicious circle referred to here is the one that bases judgmental assessments of such factors as enemy opposition and closeness of the terrain at least in part upon the rate of advance achieved. That is, it is easy to slip inadvertently into judging enemy resistance as slight *because* the rate of advance was high, and then to turn around and argue that the rate of advance was high *because* enemy opposition was slight. This sort of vicious circle can be broken only if the assessments of enemy

resistance and rate of advance are completely independent of one another. Without detailed knowledge of the particulars of the case, it is hard to say whether these assessments were dependent or independent.

g. On the basis of inspection of the advance distance tables, it appears that there is a significant bias in the direction of reporting attacks that gained ground as opposed to those that did not.

h. All of the values given in the source were taken from War Diaries "as accurately as the records permitted, but the degree of accuracy of these figures is not known." Also, the distances from the start line to the objective were in general derived from map square references and so do not necessarily represent a true figure of the actual distance which may have been traveled.

i. The BAORG data deal with forces that are heavily engaged. The differentiation between heavy and slight enemy opposition must be interpreted as differing degrees of opposition within that context.

4. Data Table Notes: While mode of transportation is listed as "foot," note frequent substantial tank support and organization as combined arms teams.

PART 1 OF 16

BAORG

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (HRS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	5 SEAFORTH	Holland	3000	2.74	2	0.083	32.92	10-Jan-45	10-Jan-45	S	Foot	OPEN
2	9 DLI	Holland	1500	1.37	2	0.083	16.46	16-Jan-45	16-Jan-45	S	Foot	OPEN
3	4 DORSET	Holland	3150	2.88	4.5	0.188	15.36	21-Jan-45	21-Jan-45	S	Foot	OPEN
4	4 ESSEX	Nijmegen	1750	1.60	3.5	0.146	10.97	20-Jan-45	20-Jan-45	H	Foot	OPEN
5	5 HLI	Holland	4000	3.66	8	0.333	10.97	18-Jan-45	18-Jan-45	H	Foot	OPEN
6	5 HLI	Holland	1500	1.37	2	0.083	16.46	22-Jan-45	22-Jan-45	S	Foot	OPEN
7	5 HLI	Holland	4000	3.66	5	0.208	17.56	25-Jan-45	25-Jan-45	S	Foot	OPEN
8	5 HLI	Germany	6000	5.49	2	0.083	65.84	10-Mar-45	10-Mar-45	S	Foot	OPEN
9	6 HLI	Holland	7500	6.86	5	0.208	32.92	20-Jan-45	20-Jan-45	S	Foot	OPEN
10	1 HEREFORD LT	Holland	4000	3.66	8	0.333	10.97	27-Jan-45	27-Jan-45	H	Foot	OPEN
11	7 R HAMPS	Holland	1000	0.91	0.5	0.021	43.89	14-Feb-45	14-Feb-45	H	Foot	OPEN
12	7 R HAMPS	Germany	3500	3.20	8	0.333	9.60	29-Mar-45	29-Mar-45	S	Foot	OPEN
13	5/7 GLAS H	Rhine Crossing	4000	3.66	5	0.208	17.56	23-Mar-45	23-Mar-45	S	Foot	OPEN
14	2 GLAS H	Reichwald	3500	3.20	5	0.208	15.36	09-Feb-45	09-Feb-45	S	Foot	OPEN
15	2 GLAS H	Cleve area	6000	5.49	8	0.333	16.46	11-Feb-45	11-Feb-45	S	Foot	OPEN
16	5 BW	Germany	3500	3.20	24	1	3.20	23-Mar-45	23-Mar-45	H	Foot	OPEN
17	5 BW	Germany	4200	3.84	7	0.292	13.17	27-Mar-45	27-Mar-45	S	Foot	OPEN
18	9 CAMERONIANS	Germany	4000	3.66	8	0.333	10.97	24-Mar-45	24-Mar-45	H	Foot	OPEN
19	9 CAMERONIANS	Germany	800	0.73	1.5	0.063	11.70	23-Mar-45	23-Mar-45	H	Foot	OPEN
20	9 CAMERONIANS	Germany	2000	1.83	1.5	0.063	29.26	26-Mar-45	26-Mar-45	S	Foot	OPEN
21	9 CAMERONIANS	Germany	1500	1.37	3	0.125	10.97	28-Mar-45	28-Mar-45	S	Foot	OPEN
22	5 DORSET	Holland	2500	2.29	6	0.25	9.14	15-Feb-45	15-Feb-45	H	Foot	OPEN
23	5 DORSET	Germany	2000	1.83	4	0.167	10.97	26-Mar-45	26-Mar-45	S	Foot	OPEN
24	6 CAMERONIANS	Holland	3000	2.74	2	0.083	32.92	18-Jan-45	18-Jan-45	S	Foot	OPEN
25	7 CAMERONIANS	Holland	1500	1.37	2	0.083	16.46	19-Jan-45	19-Jan-45	H	Foot	OPEN
26	7 CAMERONIANS	Holland	3600	3.29	3	0.125	26.33	21-Jan-45	21-Jan-45	H	Foot	OPEN
27	7 CAMERONIANS	Germany	2000	1.83	2.5	0.104	17.56	09-Mar-45	09-Mar-45	H	Foot	OPEN
28	3 IG	Holland	4000	3.66	2	0.083	43.89	14-Feb-45	14-Feb-45	S	Foot	OPEN
29	3 IG	Holland	3000	2.74	4	0.167	16.46	21-Feb-45	21-Feb-45	H	Foot	OPEN
30	2 SG	Germany	1500	1.37	3	0.125	10.97	08-Mar-45	08-Mar-45	H	Foot	OPEN
31	1 BW	Holland	3000	2.74	2	0.083	32.92	08-Feb-45	08-Feb-45	S	Foot	OPEN
32	1 BW	Holland	3000	2.74	2	0.083	32.92	11-Feb-45	11-Feb-45	S	Foot	OPEN
33	1 BW	Holland	3000	2.74	3	0.125	21.95	13-Feb-45	13-Feb-45	H	Foot	OPEN
34	1 BW	Germany	6000	5.49	12	0.5	10.97	23-Mar-45	23-Mar-45	H	Foot	OPEN
35	1 BW	Germany	9000	8.23	9	0.375	21.95	26-Mar-45	26-Mar-45	H	Foot	OPEN
36	1 BW	Germany	2000	1.83	1.5	0.063	29.26	29-Mar-45	29-Mar-45	S	Foot	OPEN
37	7 BW	Holland	3600	3.29	6	0.25	13.17	08-Feb-45	08-Feb-45	H	Foot	OPEN
38	7 BW	Holland	2000	1.83	1.5	0.063	29.26	13-Feb-45	13-Feb-45	H	Foot	OPEN
39	7 BW	Holland	3200	2.93	8	0.333	8.78	20-Feb-45	20-Feb-45	S	Foot	OPEN
40	7 BW	Holland	800	0.73	3	0.125	5.85	26-Feb-45	26-Feb-45	H	Foot	OPEN
41	1 GLAS H	Holland	3000	2.74	2.75	0.115	23.94	21-Jan-45	21-Jan-45	H	Foot	OPEN
42	1 GLAS H	Holland	1000	0.91	0.5	0.021	43.89	27-Jan-45	27-Jan-45	S	Foot	OPEN
43	1 GLAS H	Holland	1000	0.91	0.5	0.021	43.89	27-Jan-45	27-Jan-45	S	Foot	OPEN
44	2 MON	Holland	2300	2.10	2.75	0.115	18.35	24-Feb-45	24-Feb-45	H	Foot	OPEN
45	2 MON	Germany	1400	1.28	4	0.167	7.68	06-Mar-45	06-Mar-45	H	Foot	OPEN

BAORG

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (HRS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
46	10 HLI	Holland	4500	4.11	7.5	0.313	13.17	08-Feb-45	08-Feb-45	H	Foot	OPEN
47	1 GORDONS	Germany	550	0.50	0.75	0.031	16.09	12-Feb-45	12-Feb-45	S	Foot	OPEN
48	4 KOSB	Germany	1700	1.55	7.5	0.313	4.97	09-Mar-45	09-Mar-45	H	Foot	OPEN
49	1 E LAN R	Germany	6000	5.49	7.5	0.313	17.56	01-Mar-45	01-Mar-45	H	Foot	OPEN
50	1 E LAN R	Germany	1500	1.37	1	0.042	32.92	02-Mar-45	02-Mar-45	S	Foot	OPEN
51	1 E LAN R	Germany	7300	6.68	12	0.5	13.35	28-Mar-45	28-Mar-45	S	Foot	OPEN
52	4 KSLI	Germany	500	0.46	2.75	0.115	3.99	01-Mar-45	01-Mar-45	S	Foot	OPEN
53	7 SOM LI	Holland	2100	1.92	2.333	0.097	19.75	16-Feb-45	16-Feb-45	H	Foot	OPEN
54	7 SEAFURTH	Rhine Crossing	1000	0.91	0.75	0.031	29.26	28-Mar-45	28-Mar-45	S	Foot	OPEN
55	9 DLI	Holland	1500	1.37	21	0.875	1.57	20-Jan-45	20-Jan-45	H	Foot	OPEN
56	4 DORSE	Holland	2500	2.29	4	0.167	13.72	25-Jan-45	25-Jan-45	NA	Foot	OPEN
57	6 HLI	Holland	1500	1.37	2	0.083	16.46	27-Feb-45	27-Feb-45	NA	Foot	OPEN
58	7 R HAMPS	Holland	3000	2.74	1	0.042	65.84	22-Jan-45	22-Jan-45	NA	Foot	OPEN
59	7 R HAMPS	Holland	1000	0.91	0.75	0.031	29.26	22-Jan-45	22-Jan-45	NA	Foot	OPEN
60	5 R BEKS	Rhine Crossing	400	0.37	0.5	0.021	17.56	24-Mar-45	24-Mar-45	NA	Foot	OPEN
61	3 IG	Germany	8500	7.77	6	0.25	31.09	30-Mar-45	30-Mar-45	NA	Foot	OPEN
62	1 BW	Rhine	NA	0.00	NA	0	ERR	26-Feb-45	26-Feb-45	NA	Foot	OPEN
63	1 GLAS H	Holland	2500	2.29	3.5	0.146	15.68	20-Jan-45	20-Jan-45	NA	Foot	OPEN
64	1 GLAS H	Germany	3000	2.74	1.5	0.063	43.89	10-Mar-45	10-Mar-45	NA	Foot	OPEN
65	1 GLAS H	Germany	7500	6.86	5.75	0.24	28.62	25-Mar-45	25-Mar-45	NA	Foot	OPEN
66	1 CHESI IRE	Germany	1250	1.14	1.5	0.063	18.29	24-Mar-45	24-Mar-45	NA	Foot	OPEN
67	1 OXF EUCKS	Holland	2000	1.83	0.5	0.021	87.78	08-Feb-45	08-Feb-45	NA	Foot	OPEN
68	1 GORDONS	Holland	1700	1.55	1.667	0.069	22.39	12-Feb-45	12-Feb-45	NA	Foot	OPEN
69	1 GORDONS	Germany	1000	0.91	1.5	0.063	14.63	27-Mar-45	27-Mar-45	NA	Foot	OPEN
70	1 E LAN R	Holland	7000	6.40	8.75	0.365	17.56	11-Feb-45	11-Feb-45	NA	Foot	OPEN
71	7 SOM LI	Holland	2000	1.83	1.667	0.069	26.33	17-Feb-45	17-Feb-45	NA	Foot	OPEN
72	7 SOM LI	Holland	2350	2.15	3.5	0.146	14.73	17-Feb-45	17-Feb-45	NA	Foot	OPEN
73	7 SOM LI	Holland	2800	2.56	8	0.333	7.68	17-Feb-45	17-Feb-45	NA	Foot	OPEN
74	7 SEAFKTH	Rhine Crossing	1700	1.55	1	0.042	37.31	24-Mar-45	24-Mar-45	NA	Foot	OPEN
75	7 SEAFKTH	Rhine Crossing	1000	0.91	0.75	0.031	29.26	24-Mar-45	24-Mar-45	NA	Foot	OPEN
76	7 SEAFKTH	Rhine Crossing	3000	2.74	3.5	0.146	18.81	24-Mar-45	24-Mar-45	NA	Foot	OPEN
77	2/4 R HAMPS	Italy	900	0.82	0.5	0.021	39.50	23-Nov-44	23-Nov-44	H	Foot	OPEN
78	2/4 R HAMPS	Italy	4100	3.75	2	0.083	44.99	13-May-44	13-May-44	S	Foot	OPEN
79	5 R HAMPS	Italy	4000	3.66	5.5	0.229	15.96	30-Aug-44	30-Aug-44	S	Foot	OPEN
80	1 R H F	Italy	4300	3.93	6.25	0.26	15.10	15-Jun-44	15-Jun-44	H	Foot	OPEN
81	1 R H F	Italy	2000	1.83	10	0.417	4.39	24-Jun-44	24-Jun-44	H	Foot	OPEN
82	6 BW	Italy	1500	1.37	3	0.125	10.97	14-Sep-44	14-Sep-44	H	Foot	OPEN
83	6 BW	Italy	800	0.73	5	0.208	3.51	10-Nov-44	10-Nov-44	S	Foot	OPEN
84	2 BEDFS HERTS	Italy	1400	1.28	1	0.042	30.72	28-Jun-44	28-Jun-44	H	Foot	OPEN
85	2 BEDFS HERTS	Italy	4000	3.66	8	0.333	10.97	29-Jun-44	29-Jun-44	S	Foot	OPEN
86	2 BEDFS HERTS	Italy	1000	0.91	3	0.125	7.32	16-Jul-44	16-Jul-44	S	Foot	OPEN
87	2 BEDFS HERTS	Italy	7100	6.49	11.5	0.479	13.55	17-Jul-44	17-Jul-44	S	Foot	OPEN
88	2 BEDFS HERTS	Italy	8000	7.32	9	0.375	19.51	21-Jul-44	21-Jul-44	S	Foot	OPEN
89	2 BEDFS HERTS	Italy	3100	2.83	6.5	0.271	10.47	01-Nov-44	01-Nov-44	S	Foot	OPEN
90	2 BEDFS HERTS	Italy	500	0.46	1.25	0.052	8.78	03-Nov-44	03-Nov-44	H	Foot	OPEN

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BAORG

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (HRS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
91	2 CAMERONINAS	Italy	1100	1.01	3	0.125	8.05	18-Jan-44	18-Jan-44	H	Foot	OPEN
92	2 CAMERONINAS	Italy	6000	5.49	3.75	0.156	35.11	05-Jun-44	05-Jun-44	S	Foot	OPEN
93	1 DLI	Italy	1300	1.19	1.25	0.052	22.82	25-Nov-44	25-Nov-44	S	Foot	OPEN
94	6 R INNISKS	Italy	1900	1.74	9	0.375	4.63	15-May-44	15-May-44	H	Foot	OPEN
95	6 R INNISKS	Italy	1500	1.37	1.75	0.073	18.81	17-May-44	17-May-44	H	Foot	OPEN
96	6 R INNISKS	Italy	1500	1.37	3.25	0.135	10.13	21-Jun-44	21-Jun-44	H	Foot	OPEN
97	1 KSLI	Italy	1600	1.46	4	0.167	8.78	08-Feb-44	08-Feb-44	H	Foot	OPEN
98	2 KINGS	Italy	4300	3.93	7	0.292	13.48	12-Nov-44	12-Nov-44	S	Foot	OPEN
99	2 KINGS	Italy	1300	1.19	1	0.042	28.53	13-Nov-44	13-Nov-44	S	Foot	OPEN
100	2 KINGS	Italy	3000	2.74	2.5	0.104	26.33	21-Nov-44	21-Nov-44	S	Foot	OPEN
101	1 LOYALS	Italy	8000	7.32	10	0.417	17.56	29-May-44	29-May-44	S	Foot	OPEN
102	2 LIR	Italy	2200	2.01	11	0.458	4.39	16-May-44	16-May-44	H	Foot	OPEN
103	2 LIR	Italy	4200	3.84	14	0.583	6.58	21-Jun-44	21-Jun-44	H	Foot	OPEN
104	7 OXES BUCKS	Italy	1000	0.91	0.5	0.021	43.89	19-Jan-44	19-Jan-44	S	Foot	OPEN
105	5 NORTHAMPTONS	Italy	3000	2.74	7.5	0.313	8.78	24-Jun-44	24-Jun-44	S	Foot	OPEN
106	2/7 QUEENS	Italy	700	0.64	3.5	0.146	4.39	07-Dec-44	07-Dec-44	S	Foot	OPEN
107	2/5 QUEENS	Italy	1800	1.65	6	0.25	6.58	26-Sep-44	26-Sep-44	S	Foot	OPEN
108	2 SOM LI	Italy	2000	1.83	4	0.167	10.97	09-Nov-44	09-Nov-44	S	Foot	OPEN
109	2 SOM LI	Italy	3000	2.74	4.5	0.188	14.63	14-Nov-44	14-Nov-44	S	Foot	OPEN
110	5 BUFFS	Italy	14000	12.80	10	0.417	30.72	01-Jul-44	01-Jul-44	S	Foot	OPEN
111	WILTS	Italy	9000	8.23	12	0.5	16.46	29-May-44	29-May-44	S	Foot	OPEN
112	6 BW	Italy	1200	1.10	1.5	0.063	17.56	13-Jun-44	13-Jun-44	NA	Foot	OPEN
113	6 BW	Italy	950	0.87	2.5	0.104	8.34	14-Jun-44	14-Jun-44	H	Foot	OPEN
114	6 BW	Italy	1500	1.37	1	0.042	32.92	17-Jun-44	17-Jun-44	NA	Foot	OPEN
115	2 BEDFS HERTS	Italy	450	0.41	4.333	0.181	2.28	18-Sep-44	18-Sep-44	H	Foot	OPEN
116	2 CAMERONS	Italy	2500	2.29	5.25	0.219	10.45	19-Sep-44	19-Sep-44	H	Foot	OPEN
117	1 KSLI	Italy	2000	1.83	1.75	0.073	25.08	30-Jan-44	30-Jan-44	NA	Foot	OPEN
118	1 LOYALS	Italy	2500	2.29	9.5	0.396	5.78	22-Jan-44	22-Jan-44	H	Foot	OPEN
119	2 FORESTERS	Italy	1400	1.28	0.5	0.021	61.45	03-Jun-44	03-Jun-44	H	Foot	OPEN
120	1 Y & L	Italy	2000	1.83	0.75	0.031	58.52	20-Jan-44	20-Jan-44	NA	Foot	OPEN
121	2 M STAFFS	Italy	4000	3.66	5	0.208	17.56	23-Jan-44	23-Jan-44	H	Foot	OPEN
122	5 BUFFS	Italy	5000	4.57	4.75	0.198	23.10	02-Jul-44	02-Jul-44	NA	Foot	OPEN
123	5 BUFFS	Italy	1000	0.91	0.75	0.031	29.26	18-May-44	18-May-44	S	Foot	OPEN
124	5 BUFFS	Italy	3000	2.74	1	0.042	65.84	18-Jun-44	18-Jun-44	S	Foot	OPEN
125	4 DORSET	Holland	2125	1.94	2.5	0.104	18.65	15-Feb-45	15-Feb-45	H	Foot	CLOSE
126	7 RWF	Cleve Area	2000	1.83	3	0.125	14.63	11-Feb-45	11-Feb-45	S	Foot	CLOSE
127	2 RUR	Holland	1750	1.60	4	0.167	9.60	27-Feb-45	27-Feb-45	H	Foot	CLOSE
128	1 HLI	Holland	1500	1.37	3	0.125	10.97	07-Jan-45	07-Jan-45	S	Foot	CLOSE
129	1 HLI	Holland	3500	3.20	6	0.25	12.80	08-Feb-45	08-Feb-45	S	Foot	CLOSE
130	5/7 GLAS H	Holland	3000	2.74	1.5	0.063	43.89	09-Jan-45	09-Jan-45	S	Foot	CLOSE
131	5/7 GLAS H	Holland	3000	2.74	6	0.25	10.97	08-Feb-45	08-Feb-45	H	Foot	CLOSE
132	2 GLAS H	Cleve Area	3000	2.74	4	0.167	16.46	20-Feb-45	20-Feb-45	S	Foot	CLOSE
133	2 GLAS H	Holland	500	0.46	2.5	0.104	4.39	09-Feb-45	09-Feb-45	H	Foot	CLOSE
134	5 BW	Holland	500	0.46	1	0.042	10.97	16-Feb-45	16-Feb-45	S	Foot	CLOSE
135	5 BW	Germany	900	0.82	3	0.125	6.58	25-Feb-45	25-Feb-45	S	Foot	CLOSE

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136	9 CAMEPONIANS	Holland	5000	4.57	3.5	0.146	31.35	22-Feb-45	22-Feb-45	H	Foot	CLOSE
137	5 DORSFT	Germany	1000	0.91	1	0.042	21.95	29-Mar-45	29-Mar-45	S	Foot	CLOSE
138	2 S G	Germany	2000	1.83	5	0.208	8.78	06-Mar-45	06-Mar-45	H	Foot	CLOSE
139	1 BW	Holland	3000	2.74	3	0.125	21.95	11-Jan-45	11-Jan-45	S	Foot	CLOSE
140	7 BW	Holland	1500	1.37	1	0.042	32.92	11-Feb-45	11-Feb-45	S	Foot	CLOSE
141	2 MON	Holland	2000	1.83	3	0.125	14.63	04-Jan-45	04-Jan-45	S	Foot	CLOSE
142	2 MON	Holland	1050	0.96	0.5	0.021	46.09	09-Feb-45	09-Feb-45	S	Foot	CLOSE
143	2 MON	Holland	1400	1.28	4	0.167	7.68	11-Feb-45	11-Feb-45	H	Foot	CLOSE
144	2 MON	Holland	600	0.55	1.5	0.063	8.78	12-Feb-45	12-Feb-45	H	Foot	CLOSE
145	1 OXF BUCKS	Holland	2000	1.83	1.5	0.063	29.26	04-Jan-45	04-Jan-45	S	Foot	CLOSE
146	1 OXF BUCKS	Holland	1000	0.91	1	0.042	21.95	07-Jan-45	07-Jan-45	H	Foot	CLOSE
147	1 E LAN R	Holland	2100	1.92	7	0.292	6.58	04-Jan-45	04-Jan-45	H	Foot	CLOSE
148	1 E LAN R	Holland	1200	1.10	2	0.083	13.17	05-Jan-45	05-Jan-45	H	Foot	CLOSE
149	1 E LAN R	Holland	2000	1.83	2	0.083	21.95	07-Jan-45	07-Jan-45	H	Foot	CLOSE
150	4 KSLI	Holland	3500	3.20	15	0.625	5.12	02-Mar-45	02-Mar-45	H	Foot	CLOSE
151	1 S LAN R	Holland	1600	1.46	5.5	0.229	6.38	27-Feb-45	27-Feb-45	H	Foot	CLOSE
152	5 HLI	Holland	2500	2.29	3	0.125	18.29	16-Feb-45	16-Feb-45	H	Foot	CLOSE
153	4 DORSET	Holland	1000	0.91	3.5	0.146	6.27	17-Feb-45	17-Feb-45	NA	Foot	CLOSE
154	7 RWF	Holland	2500	2.29	4.5	0.188	12.19	04-Jan-45	04-Jan-45	NA	Foot	CLOSE
155	7 RWF	Holland	1000	0.91	2	0.083	10.97	04-Jan-45	04-Jan-45	NA	Foot	CLOSE
156	4 DORSET	Germany	1500	1.37	5.25	0.219	6.27	29-Mar-45	29-Mar-45	NA	Foot	CLOSE
157	2 SEAFORTH	Reichwald	2500	2.29	3.25	0.135	16.88	10-Feb-45	10-Feb-45	NA	Foot	CLOSE
158	1 GLAS H	Holland	750	0.69	1	0.042	16.46	09-Feb-45	09-Feb-45	NA	Foot	CLOSE
159	9 CAMERONIANS	Holland	NA	0.00	1.5	0.063	0.00	08-Feb-45	08-Feb-45	NA	Foot	CLOSE
160	5 DCL I	Reichwald Area	3000	2.74	3	0.125	21.95	10-Feb-45	10-Feb-45	H	Foot	CLOSE
161	5 DCL I	Reichwald Area	1500	1.37	2.5	0.104	13.17	11-Feb-45	11-Feb-45	H	Foot	CLOSE
162	5 CAMERONS	Reichwald Area	3600	3.29	9	0.375	8.78	09-Feb-45	09-Feb-45	S	Foot	CLOSE
163	1 OXF BUCKS	Holland	800	0.73	0.5	0.021	35.11	08-Feb-45	08-Feb-45	NA	Foot	CLOSE
164	1 OXF BUCKS	Holland	900	0.82	0.75	0.031	26.33	08-Feb-45	08-Feb-45	NA	Foot	CLOSE
165	2 E YORKS	Weeze Area	1100	1.01	1.5	0.063	16.09	27-Feb-45	27-Feb-45	NA	Foot	CLOSE
166	2 E YORKS	Weeze Area	600	0.55	1	0.042	13.17	27-Feb-45	27-Feb-45	NA	Foot	CLOSE
167	2 E YORKS	Weeze Area	600	0.55	1	0.042	13.17	27-Feb-45	27-Feb-45	NA	Foot	CLOSE
168	2/4 R HAMPS	Italy	1500	1.37	4.5	0.188	7.32	25-Jun-44	25-Jun-44	H	Foot	CLOSE
169	2/4 R HAMPS	Italy	4500	4.11	7.5	0.313	13.17	01-Jul-44	01-Jul-44	S	Foot	CLOSE
170	2/4 R HAMPS	Italy	6000	5.49	3	0.125	43.89	02-Jul-44	02-Jul-44	S	Foot	CLOSE
171	2/4 R HAMPS	Italy	6000	5.49	12.5	0.521	10.53	22-Jul-44	22-Jul-44	H	Foot	CLOSE
172	2/4 R HAMPS	Italy	1100	1.01	0.667	0.028	36.21	17-Sep-44	17-Sep-44	S	Foot	CLOSE
173	1 GREEN HOWARDS	Italy	900	0.82	2	0.083	9.88	22-Jan-44	22-Jan-44	H	Foot	CLOSE
174	2 HAMPS	Italy	8000	7.32	16	0.667	10.97	27-Aug-44	27-Aug-44	S	Foot	CLOSE
175	1 R IR F	Italy	3000	2.74	7.75	0.323	8.50	01-May-44	01-May-44	H	Foot	CLOSE
176	2 BEDFS HERITS	Italy	2300	2.10	5.5	0.229	9.18	07-Aug-44	07-Aug-44	H	Foot	CLOSE
177	2 DCL I	Italy	5000	4.57	3	0.125	36.58	25-Oct-44	25-Oct-44	S	Foot	CLOSE
178	2 DCL I	Italy	5500	5.03	9.25	0.385	13.05	30-Jun-44	30-Jun-44	S	Foot	CLOSE
179	2 DCL I	Italy	750	0.69	1	0.042	16.46	13-May-44	13-May-44	H	Foot	CLOSE
180	1/4 R HAMPS	Italy	5500	5.03	13	0.542	9.28	28-Aug-44	28-Aug-44	H	Foot	CLOSE

PART 5 OF 16

BAORG

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (HRS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
181	1/4 R HAMPS	Italy	6000	5.49	14.5	0.604	9.08	31-Aug-44	31-Aug-44	H	Foot	CLOSE
182	1/4 R HAMPS	Italy	5000	4.57	12	0.5	9.14	04-Sep-44	04-Sep-44	H	Foot	CLOSE
183	1 KSLI	Italy	700	0.64	0.5	0.021	30.72	03-Jul-44	03-Jul-44	H	Foot	CLOSE
184	1 KSLI	Italy	3000	2.74	3.5	0.146	18.81	11-Sep-44	11-Sep-44	S	Foot	CLOSE
185	1 KSLI	Italy	2000	1.83	2.5	0.104	17.56	11-Sep-44	11-Sep-44	S	Foot	CLOSE
186	1 KSLI	Italy	1000	0.91	3	0.125	7.32	15-Sep-44	15-Sep-44	S	Foot	CLOSE
187	1 KSLI	Italy	1200	1.10	4.5	0.188	5.85	16-Sep-44	16-Sep-44	S	Foot	CLOSE
188	2 KINGS	Italy	2200	2.01	11	0.458	4.39	08-Nov-44	08-Nov-44	H	Foot	CLOSE
189	2 KINGS	Italy	1900	1.74	3.5	0.146	11.91	05-Jul-44	05-Jul-44	S	Foot	CLOSE
190	2 KINGS	Italy	12000	10.97	8	0.333	32.92	16-Jul-44	16-Jul-44	S	Foot	CLOSE
191	2 KINGS	Italy	1700	1.55	0.667	0.028	55.96	23-Jul-44	23-Jul-44	S	Foot	CLOSE
192	2 KINGS	Italy	1100	1.01	2	0.083	12.07	15-Sep-44	15-Sep-44	H	Foot	CLOSE
193	6 RUK	Italy	1350	1.23	3	0.125	9.88	20-Jun-44	20-Jun-44	S	Foot	CLOSE
194	5 NORTHAMPTONS	Italy	2600	2.38	2	0.083	28.53	25-May-44	25-May-44	S	Foot	CLOSE
195	5 NORTHAMPTONS	Italy	2500	2.29	3	0.125	18.29	02-Jun-44	02-Jun-44	S	Foot	CLOSE
196	5 NORTHAMPTONS	Italy	2200	2.01	3.75	0.156	12.87	03-Jun-44	03-Jun-44	S	Foot	CLOSE
197	5 NORTHAMPTONS	Italy	2400	2.19	6	0.25	8.78	16-Jun-44	16-Jun-44	H	Foot	CLOSE
198	5 NORTHAMPTONS	Italy	3000	2.74	12.25	0.51	5.37	19-Jun-44	19-Jun-44	S	Foot	CLOSE
199	2/7 QUEENS	Italy	1100	1.01	1.75	0.073	13.79	13-Sep-44	13-Sep-44	H	Foot	CLOSE
200	2/7 QUEENS	Italy	300	0.27	4.25	0.177	1.55	20-Sep-44	20-Sep-44	H	Foot	CLOSE
201	2 SOM LI	Italy	3300	3.02	2.25	0.094	32.19	22-Sep-44	22-Sep-44	S	Foot	CLOSE
202	2 SOM LI	Italy	5200	4.75	8.75	0.365	13.04	01-Jul-44	01-Jul-44	S	Foot	CLOSE
203	2 SOM LI	Italy	5000	4.57	6.25	0.26	17.56	02-Jul-44	02-Jul-44	S	Foot	CLOSE
204	2 SOM LI	Italy	4800	4.39	2	0.083	52.67	03-Jul-44	03-Jul-44	S	Foot	CLOSE
205	2 SOM LI	Italy	2200	2.01	2.5	0.104	19.31	26-Jul-44	26-Jul-44	S	Foot	CLOSE
206	WILTS	Italy	1000	0.91	2.25	0.094	9.75	03-Jun-44	03-Jun-44	S	Foot	CLOSE
207	1 FORESTERS	Italy	1050	0.96	7	0.292	3.29	13-Sep-44	13-Sep-44	H	Foot	CLOSE
208	5 FORESTERS	Italy	5000	4.57	10	0.417	10.97	29-Aug-44	29-Aug-44	S	Foot	CLOSE
209	5 FORESTERS	Italy	3000	2.74	2.25	0.094	29.26	29-Sep-44	29-Sep-44	S	Foot	CLOSE
210	5 FORESTERS	Italy	2000	1.83	7.75	0.323	5.66	16-Oct-44	16-Oct-44	H	Foot	CLOSE
211	5 BUFFS	Italy	1200	1.10	0.5	0.021	52.67	26-Oct-44	26-Oct-44	S	Foot	CLOSE
212	5 BUFFS	Italy	4500	4.11	3	0.125	32.92	30-May-44	30-May-44	S	Foot	CLOSE
213	5 BUFFS	Italy	3000	2.74	3	0.125	21.95	20-Jun-44	20-Jun-44	S	Foot	CLOSE
214	2/4 KOYLI	Italy	1100	1.01	2.5	0.104	9.66	02-Sep-44	02-Sep-44	NA	Foot	CLOSE
215	2 KINGS	Italy	6600	6.04	7.5	0.313	19.31	02-Jul-44	02-Jul-44	S	Foot	CLOSE
216	2 KINGS	Italy	7400	6.77	9.5	0.396	17.09	03-Jul-44	03-Jul-44	H	Foot	CLOSE
217	6 R LINCOLNS	Italy	2600	2.38	9.5	0.396	6.01	01-Sep-44	01-Sep-44	H	Foot	CLOSE
218	6 R LINCOLNS	Italy	500	0.46	0.5	0.021	21.95	10-Sep-44	10-Sep-44	S	Foot	CLOSE
219	6 R LINCOLNS	Italy	4200	3.84	6.25	0.26	14.75	17-Sep-44	17-Sep-44	S	Foot	CLOSE
220	1 LOYALS	Italy	750	0.69	1.5	0.063	10.97	30-May-44	30-May-44	H	Foot	CLOSE
221	1 LIR	Italy	1500	1.37	9.5	0.396	3.47	19-Jan-44	19-Jan-44	H	Foot	CLOSE
222	2/7 QUEENS	Italy	1500	1.37	1.75	0.073	18.81	08-Sep-44	08-Sep-44	S	Foot	CLOSE
223	2 SOM LI	Italy	1000	0.91	4.5	0.188	4.88	05-Aug-44	05-Aug-44	H	Foot	CLOSE
224	2 SOM LI	Italy	3000	2.74	3	0.125	21.95	05-Aug-44	05-Aug-44	NA	Foot	CLOSE
225	2 SOM LI	Italy	3500	3.20	2.5	0.104	30.72	21-Sep-44	21-Sep-44	S	Foot	CLOSE

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (HRS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
226	2 SOM LI	Italy	1600	1.46	8.25	0.344	4.26	18-Jul-44	18-Jul-44	H	Foot	CLOSE
227	2 SOM LI	Italy	4100	3.75	7	0.292	12.85	25-Jul-44	25-Jul-44	S	Foot	CLOSE
228	6 Y & L	Italy	1500	1.37	1.5	0.063	21.95	29-Jan-44	29-Jan-44	H	Foot	CLOSE
229	2 FORRESTERS	Italy	1300	1.19	1.25	0.052	22.82	08-Feb-44	08-Feb-44	NA	Foot	CLOSE
230	2 N STAFFS	Italy	6500	5.94	2.75	0.115	51.87	30-May-44	30-May-44	H	Foot	CLOSE
231	7 R HAMPS	Holland	500	0.46	3.5	0.146	3.14	14-Feb-45	14-Feb-45	H	Foot	OPEN
232	7 R HAMPS	Germany	2200	2.01	11	0.458	4.39	25-Mar-45	25-Mar-45	S	Foot	OPEN
233	1 GLAS H	Holland	1300	1.19	2.25	0.094	12.68	17-Feb-45	17-Feb-45	S	Foot	OPEN
234	5 CAMERONS	Germany	1200	1.10	1	0.042	26.33	25-Feb-45	25-Feb-45	S	Foot	OPEN
235	5 CAMERONS	Germany	1700	1.55	2	0.083	18.65	26-Feb-45	26-Feb-45	S	Foot	OPEN
236	1 OXF BUCKS	Germany	800	0.73	0.833	0.035	21.07	01-Mar-45	01-Mar-45	S	Foot	OPEN
237	1 OXF BUCKS	Germany	800	0.73	1	0.042	17.56	03-Mar-45	03-Mar-45	S	Foot	OPEN
238	10 HLI	Holland	2200	2.01	2	0.083	24.14	15-Feb-45	15-Feb-45	S	Foot	OPEN
239	1 GLAS H	Holland	1100	1.01	5.5	0.229	4.39	20-Feb-45	20-Feb-45	H	Foot	OPEN
240	1 E LAN R	Germany	1100	1.01	1.75	0.073	13.79	05-Mar-45	05-Mar-45	S	Foot	OPEN
241	5 SEAFORTH	Holland	1000	0.91	2.5	0.104	8.78	11-Jan-45	11-Jan-45	S	Foot	OPEN
242	5 SEAFORTH	Holland	2200	2.01	1.333	0.056	36.21	16-Feb-45	16-Feb-45	S	Foot	OPEN
243	5 SEAFORTH	Holland	1000	0.91	2	0.083	10.97	27-Feb-45	27-Feb-45	S	Foot	OPEN
244	2 SEAFORTH	Cleve Area	4000	3.66	4.5	0.188	19.51	18-Feb-45	18-Feb-45	NA	Foot	OPEN
245	2 SEAFORTH	Cleve Area	1400	1.28	10	0.417	3.07	26-Feb-45	26-Feb-45	NA	Foot	OPEN
246	5 CAMERONS	Germany	2600	2.38	2.5	0.104	22.82	24-Mar-45	24-Mar-45	NA	Foot	OPEN
247	10 HLI	Rhine Crossing	1250	1.14	12	0.5	2.29	24-Mar-45	24-Mar-45	NA	Foot	OPEN
248	1 GORDONS	Rhine Crossing	900	0.82	2.25	0.094	8.78	23-Mar-45	23-Mar-45	NA	Foot	OPEN
249	1 GORDONS	Rhine Crossing	750	0.69	4	0.167	4.11	24-Mar-45	24-Mar-45	NA	Foot	OPEN
250	1 GORDONS	Rhine Crossing	1150	1.05	6.667	0.278	3.79	24-Mar-45	24-Mar-45	NA	Foot	OPEN
251	4 KSLI	Holland	1500	1.37	1.667	0.069	19.75	26-Feb-45	26-Feb-45	NA	Foot	OPEN
252	4 KSLI	Holland	1000	0.91	2.5	0.104	8.78	27-Feb-45	27-Feb-45	NA	Foot	OPEN
253	7 SOM LI	Holland	1850	1.69	9.5	0.396	4.27	11-Feb-45	11-Feb-45	NA	Foot	OPEN
254	7 SOM LI	Holland	600	0.55	1	0.042	13.17	11-Feb-45	11-Feb-45	NA	Foot	OPEN
255	5 SEAFORTH	Germany	800	0.73	2	0.083	8.78	23-Mar-45	23-Mar-45	NA	Foot	OPEN
256	5 SEAFORTH	Germany	2000	1.83	2.667	0.111	16.46	29-Mar-45	29-Mar-45	NA	Foot	OPEN
257	5 R HAMPS	Italy	1000	0.91	4.25	0.177	5.16	07-Oct-44	07-Oct-44	S	Foot	OPEN
258	6 BW	Italy	1000	0.91	2.5	0.104	8.78	18-Sep-44	18-Sep-44	S	Foot	OPEN
259	6 BW	Italy	500	0.46	3.5	0.146	3.14	13-Nov-44	13-Nov-44	S	Foot	OPEN
260	2 BEDFS HERTS	Italy	600	0.55	3.5	0.146	3.76	16-May-44	16-May-44	H	Foot	OPEN
261	2 CAMERONS	Italy	900	0.82	1.833	0.076	10.77	04-Aug-44	04-Aug-44	S	Foot	OPEN
262	2 CAMERONS	Italy	2200	2.01	4.5	0.188	10.73	01-Oct-44	01-Oct-44	S	Foot	OPEN
263	2 KINGS	Italy	1500	1.37	4.5	0.188	7.32	26-Jun-44	26-Jun-44	H	Foot	OPEN
264	2 NORTHAMPTONS	Italy	1500	1.37	4.25	0.177	7.75	30-Jan-44	30-Jan-44	H	Foot	OPEN
265	7 OXF BUCKS	Italy	1800	1.65	3	0.125	13.17	18-Jan-44	18-Jan-44	S	Foot	OPEN
266	2 RSF	Italy	600	0.55	8	0.333	1.65	18-Jan-44	18-Jan-44	H	Foot	OPEN
267	2/7 QUEENS	Italy	5000	4.57	8.75	0.365	12.54	26-Sep-44	26-Sep-44	S	Foot	OPEN
268	2 SOM LI	Italy	1000	0.91	11.5	0.479	1.91	23-Nov-44	23-Nov-44	H	Foot	OPEN
269	2 SOM LI	Italy	400	0.37	1	0.042	8.78	12-May-44	12-May-44	H	Foot	OPEN
270	5 FORESTERS	Italy	3500	3.20	8	0.333	9.60	23-Sep-44	23-Sep-44	H	Foot	OPEN

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BAORG

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (HRS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
271	2/4 R HAMPS	Italy	3100	2.83	3	0.125	22.68	09-Nov-44	09-Nov-44	S	Foot	OPEN
272	6 BW	Italy	2000	1.83	3	0.125	14.63	18-Jun-44	18-Jun-44	H	Foot	OPEN
273	2 BEDFS HERTS	Italy	2700	2.47	4.75	0.198	12.47	17-Sep-44	17-Sep-44	H	Foot	OPEN
274	2 CAMERONS	Italy	800	0.73	1.25	0.152	14.05	14-Sep-44	14-Sep-44	S	Foot	OPEN
275	6 LINCOLNS	Italy	2200	2.01	11.75	0.49	4.11	09-Nov-44	09-Nov-44	S	Foot	OPEN
276	WILTS	Italy	5000	4.57	8.5	0.354	12.91	18-Jan-44	18-Jan-44	S	Foot	OPEN
277	2 N STAFFS	Italy	6000	5.49	2	0.083	65.84	23-Jan-44	23-Jan-44	S	Foot	OPEN
278	7 RWF	Cleve Area	2000	1.83	1.5	0.063	29.26	10-Feb-45	10-Feb-45	S	Foot	CLOSE
279	1 GLAS H	Holland	1000	0.91	4.5	0.188	4.88	09-Feb-45	09-Feb-45	H	Foot	CLOSE
280	1 E LAN R	Holland	2100	1.92	10.5	0.438	4.39	08-Feb-45	08-Feb-45	H	Foot	CLOSE
281	5 SEAFORTH	Holland	1000	0.91	1.75	0.073	12.54	11-Feb-45	11-Feb-45	H	Foot	CLOSE
282	4 DORSET	Germany	1100	1.01	5.5	0.229	4.39	26-Mar-45	26-Mar-45	NA	Foot	CLOSE
283	1 SEAFORTH	Holland	1750	1.60	5.25	0.219	7.32	28-Mar-45	28-Mar-45	NA	Foot	CLOSE
284	1 SEAFORTH	Holland	2500	2.29	1.667	0.069	32.92	08-Feb-45	08-Feb-45	NA	Foot	CLOSE
285	1 SEAFORTH	Holland	600	0.55	0.5	0.021	26.33	08-Feb-45	08-Feb-45	NA	Foot	CLOSE
286	1 SEAFORTH	Holland	750	0.69	0.667	0.028	24.69	08-Feb-45	08-Feb-45	NA	Foot	CLOSE
287	2 R HAMPS	Italy	9000	8.23	13	0.542	15.19	25-Aug-44	25-Aug-44	S	Foot	CLOSE
288	5 R HAMPS	Italy	2600	2.38	13	0.542	4.39	27-Aug-44	27-Aug-44	S	Foot	CLOSE
289	5 R HAMPS	Italy	3500	3.20	5.5	0.229	13.97	29-Aug-44	29-Aug-44	S	Foot	CLOSE
290	S DCLI	Italy	1000	0.91	2	0.083	10.97	26-Oct-44	26-Oct-44	H	Foot	CLOSE
291	1 DCLI	Italy	600	0.55	3.5	0.146	3.76	15-Dec-44	15-Dec-44	H	Foot	CLOSE
292	2 KINGS	Italy	1000	0.91	0.833	0.035	26.33	17-Sep-44	17-Sep-44	H	Foot	CLOSE
293	2 LF	Italy	1200	1.10	12	0.5	2.19	14-Oct-44	14-Oct-44	S	Foot	CLOSE
294	2 LF	Italy	800	0.73	2	0.083	8.78	23-Oct-44	23-Oct-44	H	Foot	CLOSE
295	6 RWK	Italy	2000	1.83	5.5	0.229	7.98	18-Oct-44	18-Oct-44	S	Foot	CLOSE
296	6 RWK	Italy	500	0.46	1.25	0.052	8.78	13-Dec-44	13-Dec-44	H	Foot	CLOSE
297	1 LIR	Italy	3600	3.29	8	0.333	9.88	06-Sep-44	06-Sep-44	H	Foot	CLOSE
298	11 LF	Italy	750	0.69	4.25	0.177	3.87	16-Oct-44	16-Oct-44	H	Foot	CLOSE
299	2/7 QUEENS	Italy	1000	0.91	4	0.167	5.49	18-Jan-44	18-Jan-44	S	Foot	CLOSE
300	2/7 QUEENS	Italy	2800	2.56	3.5	0.146	17.56	02-Sep-44	02-Sep-44	H	Foot	CLOSE
301	2/5 QUEENS	Italy	1600	1.46	17.75	0.74	1.98	17-Jan-44	17-Jan-44	H	Foot	CLOSE
302	2 SOM LI	Italy	9000	8.23	11.5	0.479	17.17	17-Jul-44	17-Jul-44	S	Foot	CLOSE
303	1/6 SURREYS	Italy	1500	1.37	1	0.042	32.92	19-Sep-44	19-Sep-44	S	Foot	CLOSE
304	1 WELCH	Italy	1500	1.37	2	0.083	16.46	17-Sep-44	17-Sep-44	S	Foot	CLOSE
305	5 FORESTERS	Italy	5000	4.57	24	1	4.57	30-Aug-44	30-Aug-44	H	Foot	CLOSE
306	1 SURREYS	Italy	600	0.55	1	0.042	13.17	24-Oct-44	24-Oct-44	S	Foot	CLOSE
307	5 BUFFS	Italy	1100	1.01	2	0.083	12.07	19-Oct-44	19-Oct-44	S	Foot	CLOSE
308	2/4 KOYLI	Italy	7000	6.40	14.25	0.594	10.78	01-Sep-44	01-Sep-44	S	Foot	CLOSE
309	2/4 KOYLI	Italy	1100	1.01	2.5	0.104	9.66	03-Sep-44	03-Sep-44	S	Foot	CLOSE
310	1 LIVRPL SCOT	Italy	1000	0.91	2	0.083	10.97	06-Sep-44	06-Sep-44	S	Foot	CLOSE
311	2/5 QUEENS	Italy	1000	0.91	3	0.125	7.32	14-Sep-44	14-Sep-44	H	Foot	CLOSE
312	6 Y & L	Italy	1900	1.74	6	0.25	6.95	29-Jan-44	29-Jan-44	H	Foot	CLOSE
313	6 Y & L	Italy	900	0.82	2	0.083	9.88	19-Sep-44	19-Sep-44	NA	Foot	CLOSE
314	6 Y & L	Italy	1600	1.46	2.75	0.115	12.77	19-Sep-44	19-Sep-44	NA	Foot	CLOSE
315	6 Y & L	Italy	1500	1.37	2.75	0.115	11.97	19-Sep-44	19-Sep-44	NA	Foot	CLOSE

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (HRS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
316	6 Y & L	Italy	1200	1.10	3	0.125	8.78	12-Oct-44	12-Oct-44	S	Foot	CLOSE
317	5 BUFFS	Italy	1500	1.37	0.75	0.031	43.89	18-Jun-44	18-Jun-44	NA	Foot	CLOSE
318	5 BUFFS	Italy	1500	1.37	3.25	0.135	10.13	23-Jun-44	23-Jun-44	NA	Foot	CLOSE
319	6 HLI	Holland	1000	0.91	4.5	0.188	4.88	23-Jan-45	23-Jan-45	NA	Foot	URBAN
320	5/7 GORDONS	GOCH Area	500	0.46	10	0.417	1.10	19-Feb-45	19-Feb-45	NA	Foot	URBAN
321	5 BW	Holland	1500	1.37	3	0.125	10.97	15-Feb-45	15-Feb-45	NA	Foot	URBAN
322	6 CAMERONIANS	Holland	3900	3.57	3	0.125	28.53	19-Jan-45	19-Jan-45	NA	Foot	URBAN
323	1 GORDONS	Holland	1500	1.37	6.75	0.281	4.88	19-Feb-45	19-Feb-45	NA	Foot	URBAN
324	1 GORDONS	GOCH Area	600	0.55	1	0.042	13.17	11-Feb-45	11-Feb-45	NA	Foot	URBAN
325	1 R NORFOLK	Germany	800	0.73	4	0.167	4.39	01-Mar-45	01-Mar-45	NA	Foot	URBAN
326	5 BW	Holland	900	0.82	3	0.125	6.58	19-Feb-45	19-Feb-45	NA	Foot	URBAN
327	5 BW	Germany	NA	0.00	NA	0	ERR	20-Feb-45	20-Feb-45	NA	Foot	URBAN
328	1 CHESHIRE	Germany	1000	0.91	1.75	0.073	12.54	25-Mar-45	25-Mar-45	NA	Foot	URBAN
329	1 CHESHIRE	Germany	250	0.23	0.75	0.031	7.32	25-Mar-45	25-Mar-45	NA	Foot	URBAN
330	1 GORDONS	Germany	850	0.78	1	0.042	18.65	12-Feb-45	12-Feb-45	NA	Foot	URBAN
331	1 GORDONS	Rhine Crossing	200	0.18	2	0.083	2.19	24-Mar-45	24-Mar-45	NA	Foot	URBAN

BAORG

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	DAY/ NITE	FORCE SIZE (COMPANIES)	TOTAL CASUALTIES	COMMENTS (SUPPORT)
1	5 SEAFORTH	NA	NA	DAY	3	0	Tanks
2	9 DLI	NA	NA	DAY	2	16	Flails
3	4 DORSET	NA	NA	DAY	3	5	Tanks
4	4 ESSEX	NA	NA	DAY	3	63	Tanks
5	5 HLI	NA	NA	DAY	3	42	NA
6	5 HLI	NA	NA	DAY	3	21	NA
7	5 HLI	NA	NA	DAY	3	6	NA
8	5 HLI	NA	NA	DAY	3	6	RA
9	6 HLI	NA	NA	DAY	3	18	Tanks
10	1 HEREFORD LI	NA	NA	DAY	3	54	Tanks
11	7 R HAMPS	NA	NA	DAY	1	15	Tanks
12	7 R HAMPS	NA	NA	DAY	2	22	Wasps
13	5/7 GLAS H	NA	NA	DAY	3	15	RA
14	2 GLAS H	NA	NA	DAY	3	12	RA
15	2 GLAS H	NA	NA	DAY	3	9	Tanks
16	5 BW	NA	NA	DAY	3	48	RA
17	5 BW	NA	NA	DAY	3	9	RA
18	9 CAMERONIANS	NA	NA	DAY	3	36	RA
19	9 CAMERONIANS	NA	NA	DAY	2	20	RA
20	9 CAMERONIANS	NA	NA	DAY	3	0	Crocs
21	9 CAMERONIANS	NA	NA	DAY	3	6	Tanks
22	5 DORSET	NA	NA	DAY	3	63	RA
23	5 DORSET	NA	NA	DAY	3	6	RA
24	6 CAMERONIANS	NA	NA	DAY	3	24	RA
25	7 CAMERONIANS	NA	NA	DAY	3	36	RA
26	7 CAMERONIANS	NA	NA	DAY	3	36	Tanks
27	7 CAMERONIANS	NA	NA	DAY	3	127	NA
28	3 IG	NA	NA	DAY	2	0	RA
29	3 IG	NA	NA	DAY	3	138	RA
30	2 SG	NA	NA	DAY	2	46	Tanks
31	1 BW	NA	NA	DAY	2	6	Tanks
32	1 BW	NA	NA	DAY	2	16	RA
33	1 BW	NA	NA	DAY	3	48	RA
34	1 BW	NA	NA	DAY	3	81	Tanks
35	1 BW	NA	NA	DAY	3	33	NA
36	1 BW	NA	NA	DAY	3	3	RA
37	7 BW	NA	NA	DAY	3	240	Tanks
38	7 BW	NA	NA	DAY	3	27	RA
39	7 BW	NA	NA	DAY	3	45	RA
40	7 BW	NA	NA	DAY	2	26	RA
41	1 GLAS H	NA	NA	DAY	2	56	RA
42	1 GLAS H	NA	NA	DAY	1	5	Tanks
43	1 GLAS H	NA	NA	DAY	1	4	Tanks
44	2 MON	NA	NA	DAY	3	51	RA
45	2 MON	NA	NA	DAY	3	60	Sqn Tanks

BAORG

NO.	OPERATION NAME/PHASE	VE. EATION	FOOTING	DAY/ NITE	FORCE (COMPANIES)	SIZE	TOTAL CASUALTIES	COMMENTS (SUPPORT)
46	10 HLI	NA	NA	DAY	3	54	Tanks	RA
47	1 GORDONS	NA	NA	DAY	2	2	Tanks	RA
48	4 KOSB	NA	NA	DAY	3	81	Tanks	RA
49	1 E LAN R	NA	NA	DAY	3	63	Tanks	ARCS
50	1 E LAN R	NA	NA	DAY	3	9	NA	
51	1 E LAN R	NA	NA	DAY	3	45	Tanks	RA
52	4 KSLI	NA	NA	DAY	1	5	Tanks	RA
53	7 SOM LI	NA	NA	DAY	2	36	Tanks	RA
54	7 SEAFORTH	NA	NA	DAY	3	4	Cross	RA
55	9 DLI	NA	NA	DAY	4	NA	Tanks	RA
56	4 DORSET	NA	NA	DAY	3	NA	Tanks	RA
57	6 HLI	NA	NA	DAY	3	NA	Tanks	RA
58	7 R HAMS	NA	NA	DAY	2	NA	Tanks	RA
59	7 R HAMS	NA	NA	DAY	1	NA	Tanks	RA
60	5 R BERKS	NA	NA	DAY	2	7	RA	
61	3 JL	NA	NA	DAY	3	NA	Nil	
62	1 BW	NA	NA	DAY	2	NA	RA	
63	1 GLAS H	NA	NA	DAY	4	NA	RA	
64	1 GLAS H	NA	NA	DAY	3	NA	Tanks	RA
65	1 GLAS H	NA	NA	DAY	4	NA	RA	
66	1 CHESHIRE	NA	NA	DAY	2	NA	RA	
67	1 OXF BUCKS	NA	NA	DAY	2	NA	RA	
68	1 GORDONS	NA	NA	DAY	4	NA	Tanks	
69	1 GORDONS	NA	NA	DAY	2	NA	NA	
70	1 E LAN R	NA	NA	DAY	3	NA	Tanks	RA
71	7 SOM LI	NA	NA	DAY	1	NA	Tanks	RA
72	7 SOM LI	NA	NA	DAY	1	NA	Tanks	RA
73	7 SOM LI	NA	NA	DAY	1	NA	Tanks	RA
74	7 SEAFORTH	NA	NA	DAY	1	NA	Tanks	RA
75	7 SEAFORTH	NA	NA	DAY	1	NA	Tanks	
76	7 SEAFORTH	NA	NA	DAY	3	NA	Tanks	
77	2/4 R HAMS	NA	NA	DAY	2	15	RA	
78	2/4 R HAMS	NA	NA	DAY	3	11	RA	
79	5 R HAMS	NA	NA	DAY	2	7	Tanks	
80	1 R H F	NA	NA	DAY	1	10	RA	
81	1 R H F	NA	NA	DAY	3	25	RA	
82	6 BW	NA	NA	DAY	3	67	RA	Tanks
83	6 BW	NA	NA	DAY	3	7	Tanks	Tanks
84	2 BEDFS HERTS	NA	NA	DAY	2	46	RA	2 Tk Pltn
85	2 BEDFS HERTS	NA	NA	DAY	3	15	Nil	
86	2 BEDFS HERTS	NA	NA	DAY	3	0	RA	
87	2 BEDFS HERTS	NA	NA	DAY	3	25	Nil	
88	2 BEDFS HERTS	NA	NA	DAY	3	0	Nil	
89	2 BEDFS HERTS	NA	NA	DAY	1	0	Tanks	
90	2 BEDFS HERTS	NA	NA	DAY	1	6	Tanks	

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BAORG

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	DAY/	FORCE	SIZE	TOTAL	CASUALTIES	COMMENTS (SUPPORT)
				NITE	(COMPANIES)				
91	2 CAMERON/INAS	NA	NA	DAY	2		60	Nil	
92	2 CAMERON/INAS	NA	NA	DAY	3		4	ARCS	
93	1 DLI	NA	NA	DAY	1		4	RA	
94	6 R INNISKS	NA	NA	DAY	3		65	Tanks	1 Tk Sqn
95	6 R INNISKS	NA	NA	DAY	3		33	Tanks	1 Tk Sqn
96	6 R INNISKS	NA	NA	DAY	3		31	RA	Tanks
97	1 KSLI	NA	NA	DAY	2		30	RA	
98	2 KINGS	NA	NA	DAY	2		8	Tanks	Tk Pltn
99	2 KINGS	NA	NA	DAY	1		0	Nil	
100	2 KINGS	NA	NA	DAY	2		0	Nil	
101	1 LOYALS	NA	NA	DAY	3		0	Nil	
102	2 LIR	NA	NA	DAY	3		100	Tanks	
103	2 LIR	NA	NA	DAY	3		76	Tanks	
104	7 OXFS BUCKS	NA	NA	DAY	3		4	RA	
105	5 NORTHAMPTONS	NA	NA	DAY	3		9	Tanks	
106	2/7 QUEENS	NA	NA	DAY	2		10	Tanks	
107	2/5 QUEENS	NA	NA	DAY	3		3	Tanks	1 Tk Pltn
108	2 SOM LI	NA	NA	DAY	2		0	Nil	2 Tk Pltn
109	2 SOM LI	NA	NA	DAY	3		0	Nil	
110	5 BUFFS	NA	NA	DAY	3		0	Tanks	
111	WILTS	NA	NA	DAY	3		22	Nil	
112	6 BW	NA	NA	DAY	3		NA	Tanks	RA
113	6 BW	NA	NA	DAY	3		NA	Tanks	RA
114	6 BW	NA	NA	DAY	3		NA	Tanks	RA
115	2 BEDFS HERTS	NA	NA	DAY	1		NA	Tanks	
116	2 CAMERONS	NA	NA	DAY	3		NA	Tanks	
117	1 KSLI	NA	NA	DAY	2		NA	Tanks	RA
118	1 LOYALS	NA	NA	DAY	3		NA	Nil	
119	2 FORESTERS	NA	NA	DAY	2		NA	RA	Tanks
120	1 Y & L	NA	NA	DAY	2		NA	RA	
121	2 N STAFFS	NA	NA	DAY	3		NA	Nil	
122	5 BUFFS	NA	NA	DAY	2		NA	Tanks	
123	5 BUFFS	NA	NA	DAY	1		NA	Tanks	
124	5 BUFFS	NA	NA	DAY	3		NA	Nil	
125	4 DORSET	NA	NA	DAY	2		70	NA	
126	7 RVF	NA	NA	DAY	3		15	Tanks	
127	2 RUR	NA	NA	DAY	3		48	Tanks	RA
128	1 HLI	NA	NA	DAY	3		18	RA	
129	1 HLI	NA	NA	DAY	3		21	Tanks	RA
130	5/7 GLAS H	NA	NA	DAY	3		0	Tanks	RA
131	5/7 GLAS H	NA	NA	DAY	3		30	Tanks	RA
132	2 GLAS H	NA	NA	DAY	3		12	NA	
133	2 GLAS H	NA	NA	DAY	2		10	RA	
134	5 BW	NA	NA	DAY	2		0	RA	
135	5 BW	NA	NA	DAY	3		3	RA	

BAORG

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	DAY/ NITE	FORCE (COMPANIES)	SIZE	TOTAL CASUALTIES	COMMENTS (SUPPORT)
136	9 CAMERONIANS	NA	NA	DAY	3		75	Air Tanks
137	5 DORSET	NA	NA	DAY	3		6	RA
138	2 S G	NA	NA	DAY	2		32	RA
139	1 BW	NA	NA	DAY	3		6	ARCS
140	7 BW	NA	NA	DAY	3		3	RA
141	2 MON	NA	NA	DAY	3		9	Tanks
142	2 MON	NA	NA	DAY	3		3	Nil
143	2 MON	NA	NA	DAY	3		39	Nil
144	2 MON	NA	NA	DAY	3		21	Nil
145	1 OXF BUCKS	NA	NA	DAY	2		8	RA
146	1 OXF BUCKS	NA	NA	DAY	1		21	Tanks
147	1 E LAN R	NA	NA	DAY	3		45	Tanks
148	1 E LAN R	NA	NA	DAY	3		24	Nil
149	1 E LAN R	NA	NA	DAY	3		90	Tanks
150	4 KSLI	NA	NA	DAY	3		126	Tanks
151	1 S LAN R	NA	NA	DAY	3		76	Tanks
152	5 HLI	NA	NA	DAY	3		36	NA
153	4 DORSET	NA	NA	DAY	4		NA	NA
154	7 RVF	NA	NA	DAY	3		NA	Tanks
155	7 RVF	NA	NA	DAY	3		NA	Tanks
156	4 DORSET	NA	NA	DAY	3		NA	NA
157	2 SEAFORTH	NA	NA	DAY	3		NA	Tanks
158	1 GLAS H	NA	NA	DAY	1		NA	NA
159	9 CAMERONIANS	NA	NA	DAY	3		58	Tanks
160	5 DCLI	NA	NA	DAY	3		NA	Tanks
161	5 DCLI	NA	NA	DAY	3		NA	Tanks
162	5 CAMERONS	NA	NA	DAY	3		NA	Tanks
163	1 OXF BUCKS	NA	NA	DAY	1		NA	RA
164	1 OXF BUCKS	NA	NA	DAY	3		NA	RA
165	2 E YORKS	NA	NA	DAY	1		NA	RA
166	2 E YORKS	NA	NA	DAY	3		NA	Tanks
167	2 E YORKS	NA	NA	DAY	3		NA	Tanks
168	2/4 R HAMP	NA	NA	DAY	3		49	Tanks
169	2/4 R HAMP	NA	NA	DAY	3		20	Tanks
170	2/4 R HAMP	NA	NA	DAY	3		0	Nil
171	2/4 R HAMP	NA	NA	DAY	3		58	Tanks
172	2/4 R HAMP	NA	NA	DAY	2		10	Nil
173	1 GREEN HOWARDS	NA	NA	DAY	2		45	Mortars
174	2 HAMP	NA	NA	DAY	3		15	Nil
175	1 R IR F	NA	NA	DAY	3		31	Tanks
176	2 BEDFS HERTS	NA	NA	DAY	2		21	RA
177	2 DCLI	NA	NA	DAY	3		2	Nil
178	2 DCLI	NA	NA	DAY	3		23	Nil
179	2 DCLI	NA	NA	DAY	2		29	RA
180	1/4 R HAMP	NA	NA	DAY	3		49	Tanks

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BAORG

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	DAY/ NITE	FORCE SIZE (COMPANIES)	TOTAL CASUALTIES	COMMENTS (SUPPORT)
181	1/4 R HAMPS	NA	NA	DAY	3	45	Tanks RA
182	1/4 R HAMPS	NA	NA	DAY	3	51	Tanks RA
183	1 KSLI	NA	NA	DAY	3	54	RA
184	1 KSLI	NA	NA	DAY	2	3	RA Tanks
185	1 KSLI	NA	NA	DAY	2	0	Nil
186	1 KSLI	NA	NA	DAY	2	0	Tanks
187	1 KSLI	NA	NA	DAY	1	0	Nil
188	2 KINGS	NA	NA	DAY	2	39	Anti-Tank Gun
189	2 KINGS	NA	NA	DAY	2	13	Tanks
190	2 KINGS	NA	NA	DAY	2	12	Tanks
191	2 KINGS	NA	NA	DAY	2	15	Nil
192	2 KINGS	NA	NA	DAY	3	30	Tanks
193	6 RWK	NA	NA	DAY	2	11	Nil
194	5 NORTHAMPTONS	NA	NA	DAY	3	0	Tanks
195	5 NORTHAMPTONS	NA	NA	DAY	3	0	Nil
196	5 NORTHAMPTONS	NA	NA	DAY	3	0	Nil
197	5 NORTHAMPTONS	NA	NA	DAY	3	60	Tanks
198	5 NORTHAMPTONS	NA	NA	DAY	3	7	Nil
199	2/7 QUEENS	NA	NA	DAY	3	90	Tanks
200	2/7 QUEENS	NA	NA	DAY	3	49	Tanks
201	2 SOM LI	NA	NA	DAY	1	8	Nil
202	2 SOM LI	NA	NA	DAY	3	18	Tanks
203	2 SOM LI	NA	NA	DAY	3	9	Tanks
204	2 SOM LI	NA	NA	DAY	2	0	Tanks
205	2 SOM LI	NA	NA	DAY	1	0	Nil
206	WILTS	NA	NA	DAY	2	10	Tanks
207	1 FORESTERS	NA	NA	DAY	3	39	Tanks
208	5 FORESTERS	NA	NA	DAY	2	1	Tanks
209	5 FORESTERS	NA	NA	DAY	2	0	Nil
210	5 FORESTERS	NA	NA	DAY	1	20	Tanks
211	5 BUFFS	NA	NA	DAY	1	2	RA
212	5 BUFFS	NA	NA	DAY	1	6	Tanks
213	5 BUFFS	NA	NA	DAY	1	0	Tanks
214	2/4 KOYLI	NA	NA	DAY	2	NA	Tanks
215	2 KINGS	NA	NA	DAY	3	NA	Tanks
216	2 KINGS	NA	NA	DAY	3	NA	Tanks
217	6 R LINCOLNS	NA	NA	DAY	3	NA	Tanks
218	6 R LINCOLNS	NA	NA	DAY	3	NA	RA
219	6 R LINCOLNS	NA	NA	DAY	3	NA	RA
220	1 LOYALS	NA	NA	DAY	3	NA	Tanks
221	1 LIR	NA	NA	DAY	3	NA	Tanks
222	2/7 QUEENS	NA	NA	DAY	3	NA	RA
223	2 SOM LI	NA	NA	DAY	1	NA	Nil
224	2 SOM LI	NA	NA	DAY	1	NA	Nil
225	2 SOM LI	NA	NA	DAY	2	NA	Nil

BAORG

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	DAY/ NITE	FORCE SIZE (COMPANIES)	TOTAL CASUALTIES	COMMENTS (SUPPORT)
226	2 SOM LI	NA	NA	DAY	3	NA	Tanks
227	2 SOM LI	NA	NA	DAY	1	NA	Tanks
228	6 Y & L	NA	NA	DAY	2	NA	Nil
229	2 FORRESTERS	NA	NA	DAY	3	NA	RA
230	2 M STAFFS	NA	NA	DAY	3	NA	RA
231	7 R HAMPS	NA	NA	NITE	1	9	Tanks
232	7 R HAMPS	NA	NA	NITE	3	18	Tanks
233	1 GLAS H	NA	NA	NITE	2	4	RA
234	5 CAMERONS	NA	NA	NITE	1	2	RA
235	5 CAMERONS	NA	NA	NITE	1	4	RA
236	1 OXF BUCKS	NA	NA	NITE	1	1	Tanks
237	1 OXF BUCKS	NA	NA	NITE	2	2	RA
238	10 HLI	NA	NA	NITE	3	0	Tanks
239	1 GLAS H	NA	NA	NITE	3	132	RA
240	1 E LAN R	NA	NA	NITE	3	9	RA
241	5 SEAFORTH	NA	NA	NITE	3	21	Tanks
242	5 SEAFORTH	NA	NA	NITE	3	3	RA
243	5 SEAFORTH	NA	NA	NITE	1	3	RA
244	2 SEAFORTH	NA	NA	NITE	3	NA	RA
245	2 SEAFORTH	NA	NA	NITE	3	NA	RA
246	5 CAMERONS	NA	NA	NITE	2	NA	RA
247	10 HLI	NA	NA	NITE	3	78	RA
248	1 GORDONS	NA	NA	NITE	2	NA	NA
249	1 GORDONS	NA	NA	NITE	1	NA	NA
250	1 GORDONS	NA	NA	NITE	1	NA	NA
251	4 KSLI	NA	NA	NITE	3	NA	Tanks
252	4 KSLI	NA	NA	NITE	1	NA	Tanks
253	7 SOM LI	NA	NA	NITE	1	NA	RA
254	7 SOM LI	NA	NA	NITE	1	NA	RA
255	5 SEAFORTH	NA	NA	NITE	1	NA	RA
256	5 SEAFORTH	NA	NA	NITE	3	NA	Nil
257	5 R HAMPS	NA	NA	NITE	2	7	Nil
258	6 BW	NA	NA	NITE	3	7	RA
259	6 BW	NA	NA	NITE	1	0	Nil
260	2 BEDFS HERTS	NA	NA	NITE	3	102	RA
261	2 CAMERONS	NA	NA	NITE	1	2	RA
262	2 CAMERONS	NA	NA	NITE	3	18	RA
263	2 KINGS	NA	NA	NITE	3	93	Tanks
264	2 NORTHAMPTONS	NA	NA	NITE	3	93	RA
265	7 OXF BUCKS	NA	NA	NITE	3	0	Nil
266	2 RSF	NA	NA	NITE	3	140	LMGs
267	2/7 QUEENS	NA	NA	NITE	3	10	Tanks
268	2 SOM LI	NA	NA	NITE	2	36	Nil
269	2 SOM LI	NA	NA	NITE	3	153	RA
270	5 FORESTERS	NA	NA	NITE	1	10	Tanks

BAORG

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	DAY/ NITE	FORCE (COMPANIES)	SIZE	TOTAL CASUALTIES	COMMENTS (SUPPORT)
271	2/4 R HAMS	NA	NA	NITE	3		NA	Nil
272	6 BW	NA	NA	NITE	3		NA	Tanks
273	2 BEDFS HERTS	NA	NA	NITE	2		NA	RA
274	2 CAMERONS	NA	NA	NITE	2		NA	RA
275	6 LINCOLNS	NA	NA	NITE	3		NA	RA
276	WILTS	NA	NA	NITE	3		NA	RA
277	2 N STAFFS	NA	NA	NITE	2		NA	Nil
278	7 RW	NA	NA	NITE	3		0	Tanks
279	1 GLAS H	NA	NA	NITE	2		24	RA
280	1 E LAN R	NA	NA	NITE	3		30	Tanks
281	5 SEAFORTH	NA	NA	NITE	3		21	RA
282	4 DORSET	NA	NA	NITE	4		NA	RA
283	4 DORSET	NA	NA	NITE	3		NA	RA
284	1 SEAFORTH	NA	NA	NITE	1		NA	RA
285	1 SEAFORTH	NA	NA	NITE	2		NA	RA
286	1 SEAFORTH	NA	NA	NITE	1		NA	RA
287	2 R HAMS	NA	NA	NITE	3		9	Nil
288	5 R HAMS	NA	NA	NITE	3		9	Nil
289	5 R HAMS	NA	NA	NITE	3		1	RA
290	S DCLI	NA	NA	NITE	3		145	RA
291	1 DCLI	NA	NA	NITE	2		36	RA
292	2 KINGS	NA	NA	NITE	2		33	Tanks
293	2 LF	NA	NA	NITE	3		12	RA
294	2 LF	NA	NA	NITE	3		45	RA
295	6 RWK	NA	NA	NITE	1		5	RA
296	6 RWK	NA	NA	NITE	1		37	RA
297	1 LIR	NA	NA	NITE	3		30	Tanks
298	11 LF	NA	NA	NITE	3		30	Nil
299	2/7 QUEENS	NA	NA	NITE	3		4	Nil
300	2/7 QUEENS	NA	NA	NITE	1		14	Nil
301	2/5 QUEENS	NA	NA	NITE	3		36	RA
302	2 SOM LI	NA	NA	NITE	3		2	Tanks
303	1/6 SURREYS	NA	NA	NITE	2		10	NA
304	1 WELCH	NA	NA	NITE	2		4	RA
305	5 FORESTERS	NA	NA	NITE	3		34	Nil
306	1 SURREYS	NA	NA	NITE	3		15	NA
307	5 BUFFS	NA	NA	NITE	3		12	Tanks
308	2/4 KOYLI	NA	NA	NITE	3		NA	Tanks
309	2/4 KOYLI	NA	NA	NITE	2		NA	Tanks
310	1 LIVRPL SCOT	NA	NA	NITE	3		NA	RA
311	2/5 QUEENS	NA	NA	NITE	1		NA	Tanks
312	6 Y & L	NA	NA	NITE	2		NA	Nil
313	6 Y & L	NA	NA	NITE	1		NA	RA
314	6 Y & L	NA	NA	NITE	1		NA	RA
315	6 Y & L	NA	NA	NITE	1		NA	RA

BAORG

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	DAY/ NITE	FORCE SIZE (COMPANIES)	TOTAL CASUALTIES	COMMENTS (SUPPORT)
316	6 Y & L	NA	NA	NITE	2	NA	Nil
317	5 BUFFS	NA	NA	NITE	3	NA	Tanks
318	5 BUFFS	NA	NA	NITE	3	NA	Tanks
319	6 HLI	NA	NA	NA	3	21	Tanks
320	5/7 GORDONS	NA	NA	NA	3	4	NA
321	5 BW	NA	NA	NA	3	4	RA
322	6 CAMERONIANS	NA	NA	NA	3	45	Tanks
323	1 GORDONS	NA	NA	NA	4	68	Tanks
324	1 GORDONS	NA	NA	NA	2	14	NA
325	1 R NORFOLK	NA	NA	NA	3	165	Tanks
326	5 BW	NA	NA	NA	3	NA	NA
327	5 BW	NA	NA	NA	3	NA	RA
328	1 CHESHIRE	NA	NA	NA	1	NA	RA
329	1 CHESHIRE	NA	NA	NA	1	NA	RA
330	1 GORDONS	NA	NA	NA	2	NA	RA
331	1 GORDONS	NA	NA	NA	2	NA	NA

CAESAR

1. Data Source:

a. Title: Caesar—A History of the Art of War Among the Romans Down to the End of the Roman Empire, With a Detailed Account of the Campaigns of Caius Julius Caesar

b. Author: Dodge, Theodore Ayrault

c. Date: 1900

d. Organization: The Riverside Press, Cambridge, Houghton, Mifflin, and Co, Boston and New York

e. Number: NA

f. Available from: Libraries

2. Data Description: The CAESAR data are taken from the table entitled "Some Ancient Marches" of the source's Appendix B. This table gives distances and times of march for some ancient marches, together with the year in which the march was made and the number and kind of troops participating in it.

3. Discussion and Comments:

a. All of the marches recorded in the source took place between 490 BC and 46 BC. Most of them are for Greeks (19 out of 27 marches) and partly duplicate those in the ALEXANDE data base. They are for forces that are only lightly engaged.

b. The author has a sound reputation as a military historian and apparently took some care to make these data as accurate as he could. However, in statistical terms they are a "convenience sample," and not necessarily a random one.

c. For some other works by Dodge, see data bases ALEXANDE, CAESAR, GUSTAVUS, HANNIBAL, and NAPOLEON.

4. Data Table Notes:

a. Some of the values in the original table are estimates (the "+" indicates that the estimate is believed to be an underestimate).

b. The one Note reads "Desert. The end of thirty-six hours continuous marching; of eleven days of nearly forty miles a day."

PART 1 OF 2

CAESAR

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	Spartans	Sparta to Marathon	150	241.40	3	3	80.47	490 BC	490 BC	NA	Foot	NA
2	Ten Thousand Greeks	Myriandrus to Thapsacus	230	370.15	12	12	30.85	401 BC	401 BC	NA	Foot	NA
3	Ten Thousand Greeks	Upcountry March (Anabasis)	4000	6437.38	215	215	29.94	400 BC	400 BC	NA	Foot	NA
4	Macedonians	One-day Drill Marches	30	48.28	1	1	48.28	350 BC	350 BC	NA	NA	NA
5	Macedonians	Pelium to Thebes	300	482.80	14	14	34.49	335 BC	335 BC	NA	Foot	Mountain
6	Macedonians	Pella to Sestos	350	563.27	20	20	28.16	334 BC	334 BC	NA	Foot	NA
7	Macedonians	Phoenicia to Thapsacus	200 + 321.87	+	11	11	29.26	+331 BC	331 BC	NA	Foot	NA
8	Macedonians	Pursuit at Arbela	70	112.65	1	1	112.65	331 BC	331 BC	NA	Foot	NA
9	Macedonians	Uxians to Persian Gates	113	181.86	5	5	36.37	331 BC	331 BC	NA	Foot	Mountain
10	Macedonians	Persian Gates to Araxes	40	64.37	0.5	0.5	128.75	331 BC	331 BC	NA	Horse	NA
11	Macedonians	Ecbatana to Rhagae	220 + 354.06	+	11	11	32.19	+330 BC	330 BC	NA	Foot	NA
12	Macedonians	Pursuit of Darius	400	643.74	11	11	58.52	330 BC	330 BC	NA	Horse	NA
13	Macedonians	Pursuit of Darius	175	281.64	4	4	70.41	330 BC	330 BC	NA	Horse	NA
14	Macedonians	Pursuit of Darius	47	75.64	0.5	0.5	151.28	330 BC	330 BC	NA	Horse	NA
15	Macedonians	Hecatompylos to Aria	500 + 804.67	+	20	20	40.23	+330 BC	330 BC	NA	Foot	NA
16	Macedonians	To Artacoana	75	120.70	2	2	60.35	330 BC	330 BC	NA	Foot	NA
17	Macedonians	Capture of Bessus	150	241.40	4	4	60.35	329 BC	329 BC	NA	Foot	NA
18	Macedonians	Jaxartes to Maracanda	170	273.59	3.5	3.5	78.17	329 BC	329 BC	NA	Foot	NA
19	Macedonians	Desert of Sandar	57	91.73	1	1	91.73	325 BC	325 BC	NA	Foot	NA
20	Romans	Lilybeum to Ariminum	650	1046.07	40	40	26.15	218 BC	218 BC	NA	Foot	NA
21	Romans	Canusium to the Sena & Back	500	804.67	14	14	57.48	207 BC	207 BC	NA	Foot	NA
22	Romans	Vesontio to Axona	145	233.35	15	15	15.56	57 BC	57 BC	NA	Foot	NA
23	Romans	Samarobriua to relieve Cicero	110	177.03	5	5	35.41	54 BC	54 BC	NA	Foot	NA
24	Romans	Gergovia to Aeduan army & back	50	80.47	1	1	80.47	52 BC	52 BC	NA	Foot	NA
25	Romans	Corfinium to Brundisium	290	466.71	17	17	27.45	49 BC	49 BC	NA	Foot	NA
26	Romans	Asparagium to Dyrrachium	45	72.42	1.1	1.1	65.84	48 BC	48 BC	NA	Foot	NA
27	Romans	Zeta Raid	36	57.94	0.667	0.667	86.90	46 BC	46 BC	NA	Foot	NA

PART 2 OF 2

CAESAR

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
1	Spartans	NA	NA	2,000	Infantry	
2	Ten Thousand Greeks	NA	NA	10,000	Infantry	
3	Ten Thousand Greeks	NA	NA	6,000	Infantry	
4	Macedonians	NA	NA	NA	All Arms	30 miles/day
5	Macedonians	NA	NA	33,000	All Arms	Mountain road
6	Macedonians	NA	NA	35,000	All Arms	
7	Macedonians	NA	NA	50,000	All Arms	
8	Macedonians	NA	NA	5,000	All Arms	
9	Macedonians	NA	NA	15,000	All Arms	Bad mountain road
10	Macedonians	NA	NA	4,000	Cavalry	
11	Macedonians	NA	NA	30,000	All Arms	Hot, midsummer tropical weather
12	Macedonians	Desert	Sandy	3,000 +	Cavalry	Hot, sandy road, part desert
13	Macedonians	Desert	Sandy	3,000	Cavalry	Hot, sandy road, part desert
14	Macedonians	Desert	NA	500	Cavalry	See Note
15	Macedonians	NA	NA	23,000	All Arms	
16	Macedonians	NA	NA	6,000 +	All Arms	
17	Macedonians	NA	NA	6,000	All Arms	Ptolemy's march
18	Macedonians	NA	NA	15,000	All Arms	
19	Macedonians	Desert	NA	20,000 +	All Arms	Desert
20	Romans	NA	NA	20,000	All Arms	
21	Romans	NA	NA	7,000	All Arms	13 marching days; 1 day of battle
22	Romans	NA	NA	60,000	All Arms	
23	Romans	NA	NA	8,000	All Arms	Winter roads
24	Romans	NA	NA	16,000	All Arms	
25	Romans	NA	NA	25,000	All Arms	
26	Romans	NA	NA	21,000	All Arms	
27	Romans	NA	NA	15,000	All Arms	

CDB90

1. Data Source:

- a. Title: CAA's Combat Data Base—Version 1990 (CDB90)
- b. Author: Helmbold, Robert L.
- c. Date: 1 January 1990
- d. Organization: US Army Concepts Analysis Agency
- e. Number: NA
- f. Available from: CAA

2. Data Description: CDB90 is based on information collected over a period of several years by the Historical Evaluation and Research Organization and recently acquired and revised under CAA's supervision. It contains tabulated data on 660 battles and engagements that occurred between 1600 and 1973. About 90 items of information are given on each battle in the data base. In most cases, this includes the elapsed time for the battle and the distance advanced (or withdrawn) by the attacker. However, the rate of advance for some battles cannot be found from the information in the data base.

3. Discussion and Comments:

a. Fragments or earlier versions of this data base have appeared. The current version includes and supersedes all earlier versions. Without attempting to be exhaustive, we note that fragments or earlier versions of this data base appeared in or were used by the following:

(1) McQuie, Robert, et al, "Multivariate Analysis of Combat," PRC R-1143, Planning Research Corporation, July 1968.

(2) Warner, C. A., "An Examination of Rates of Advance as a Function of Force Ratios for Ground Combat War Games," published as Appendix G of Methods of Force Requirements Determination (MEFORD), RAC-R-121, Research Analysis Corporation, 1970, McLean, VA, AD-515 716L.

(3) "Use of Historical Data in Evaluating Military Effectiveness," Historical Evaluation and Research Organization, 1970.

(4) "A Study of the Relationship of Tactical Air Support Operations to Land Combat," Historical Research and Evaluation Organization, 1971.

(5) Pearsall, Edward S., "Casualty Rates and Opposed Advance," Working Paper No. 11, Institute for Defense Analyses, January 1972 (also presented to the Improved Methodologies for General Purposes Planning: New Methods Study).

(6) "FEBA Movement and Attrition Processes," War Gaming Directorate, CAA-SP-75-1, US Army Concepts Analysis Agency, 21 February 1975.

(7) Dupuy, Trevor N., "Numbers, Predictions and War: Using History to Evaluate Combat Factors and Predict the Outcome of Battles," The Bobbs-Merrill Company, Indianapolis, IN, 1979. (Slightly different versions of CDB-90 have also been used as part of the factual basis for Dupuy's Quantified Judgment Method, abbreviated as QJM.)

(8) "Integrated Warfare—Representing the Decision Process Within Computer Simulations of Combat," CAA-TP-85-1, US Army Concepts Analysis Agency, January 1985.

(9) Helmbold, Robert L., "Combat History Analysis Study Effort (CHASE): A Progress Report for the Period August 1984-June 1985," CAA-TP-86-2, US Army Concepts Analysis Agency, August 1986, AD-F860 122.

(10) Dupuy, Trevor N., "Can We Rely Upon Computer Combat Simulations?," Armed Forces Journal International, August 1987, pp 58-63.

(11) Helmbold, Robert L., "Do Battles and Wars Have a Common Relationship Between Casualties and Victory?," CAA-TP-87-16, US Army Concepts Analysis Agency, November 1987.

(12) McQuie, Robert, "Historical Characteristics of Combat for Wargames (Benchmarks)," Research Paper CAA-RP-87-2, US Army Concepts Analysis Agency, July 1988, AD-200 036.

(13) "Forced Changes in Combat Posture," unnumbered DMSI report, 30 September 1988, prepared for CAA by Data Memory Systems, Inc. under Contract No. MDA903-87-C-0807, AD-A201 405.

(14) "New Engagement Data for the Breakpoint Data Base," unnumbered DMSI report, 30 September 1988, prepared for CAA by Data Memory Systems, Inc. under Contract No. MDA903-87-C-0807, AD-A201 404.

(15) "Description of the Combat Data Base—Version 1990 (CDB-90)," US Army Concepts Analysis Agency, to be published.

b. Much effort has gone into developing and improving this data base, because (as evidenced by the works cited above) it has applications in many areas. The major recent efforts began with "Analysis of Factors That Have Influenced Outcomes of Battles and Wars: A Data Base of Battles and Engagements," US Army Concepts Analysis Agency, Study Report CAA-SR-84-6, in six volumes, September 1984, prepared for CAA by the Historical Evaluation and Research Organization (HERO) under Contract Number MDA903-82-C-0363, available from the Defense Technical Information Center (DTIC) as follows:

<u>Volume no.</u>	<u>AD Number</u>
1	B-086 797L
2	B-087 718L
3	B-087 719L
4	B-087 720L
5	B-087 721L
6	B-087 722L

It was recognized that corrections, clarifications, and expansions, of this version of the data base were needed. Many of these were addressed in "CHASE Data Enhancement Study (CDES)," Historical Evaluation and Research Organization (HERO), Report Number 129, in five volumes, 31 January 1986. Prepared for US Army Concepts Analysis Agency (CAA) under Contract Number MDA903-85-C-0252, and available from DTIC as AD-A175 712, AD-A175 713, AD-A175 714, AD-A175 715, and AD-A175 716. Some of the remaining errors were corrected in "Data Base Error Correction (DBEC)," unnumbered HERO report, 23 January 1987, prepared for CAA under Purchase Order Number MDA903-86-M-8560, AD-A176 750. A parallel independent review and evaluation of some data that appeared to be statistically anomalous was described in "Independent Review/ Reassessment of Anomalous Data (IR/RAD)," unnumbered LFW Management Associates, Inc. Report, 22 June 1987, in four volumes.

prepared for CAA under Contract Number MDA903-86-C-0396, and available from DTIC as AD-195 381 (Volume I), AD-195 726 (Volume II), AD-195 382 (Volume III), and AD-195 383 (Volume IV). However, the present version (CDB-90) does *not* use the changes suggested by the IR/RAD work.

c. Despite the efforts made to refine this data base, some problems may remain.

(1) First, there is the matter of anomalous data which was first raised in the CHASE progress report mentioned above and largely confirmed by the IR/RAD report and by Helmbold, Robert L. "Do Battles and Wars Have a Common Relationship Between Casualties and Victory?," CAA-TP-87-16, US Army Concepts Analysis Agency, November 1987. This anomaly clouds the relation between casualties and victory in battle. Whether it also obscures the relation between casualties and rates of advance remains to be seen.

(2) Second, there is a potential for attacker bias in the rates of advance. The first version of this data (CAA Study Report CAA-SR-84-6, in six volumes, September 1984, cited above) defined the distance advanced to be "The distance, in kilometers, from the line of departure to the *farthest point reached* by significant maneuver elements of the attacking force, measured along the axis of advance (emphasis added)." Logically then, the recorded distance advanced could *never* be negative, since no values would be reported for occasions on which the attacker was thrown back. For instance, a net attacker loss of 3 km after a brief penetration of 2 km would be recorded the same way as (and look exactly like) a 2 km gain made and held at the end of the battle. That there was such an attacker bias in the original version is confirmed by the fact that out of 601 battles, only a handful of negative advance distances were recorded. Later efforts to correct this attacker bias (described in the documents cited in paragraph b above) appear to have been only partly successful. Hence, there is a suspicion that a substantial attacker bias still remains in CDB90.

(3) Third, the actions for sequence numbers 602 through 660, which were added later, have many missing values and do not appear to be of the same quality as the others with regard to accuracy and validity.

d. The CDB90 data base gives data on forces that are heavily engaged.

4. Data Table Notes:

a. The CDB90 data tables are too extensive to give in full here. The reader is advised to consult the work cited in paragraph 3a(15), above, for the complete CDB-90 data base.

b. The fragment of the CDB90 data base given here includes those portions specifically related to distances, durations, and rates of advance. The coding scheme is explained in the following paragraphs.

c. SEQNO is an arbitrary index or sequence number.

d. NAME is the name of the battle.

e. DATE is the date the battle started, given as the year and fraction thereof.

f. WOFA1 is the attacker's width of front at the start of the battle, in km. WOFD1 is the corresponding item for the defender.

g. POST1 is the defender's primary defensive posture at the start of the battle, coded as follows: 2 = Fortified defense, 1 = Prepared defense, 0 = Hasty defense, -1 = Delaying action adopted, -2 = Withdrawal adopted, -9 = Not reported in the source.

- h. TERRA1 is terrain code 1, coded as follows: 2 = Rugged, 1 = Rolling, 0 = Flat, -9 = Not reported in the source.
- i. TERRA2 is terrain code 2, coded as follows: 2 = Wooded, 1 = Mixed, 0 = Bare, -1 = Desert, -9 = Not reported in the source.
- j. TERRA3 is terrain code 3, coded as follows: 2 = Urban, 1 = Marsh or swamp, 0 = Dunes, -9 = Not reported in the source.
- k. WX1 is weather code 1, coded as follows: 1 = Wet, 0 = Dry, -9 = Not reported in the source.
- l. WX2 is weather code 2, coded as follows: 3 = Heavy (precipitation), 2 = Light, 1 = Overcast (no precipitation), 0 = Sunny, -9 = Not reported in the source.
- m. WX3 is weather code 3, coded as follows: 1 = Hot, 0 = Mild, 2 = Cold, -9 = Not reported in the source.
- n. WX4 is weather code 4, coded as follows: 3 = Fall (season of year), 2 = Summer, 1 = Spring, 0 = Winter, -9 = Not reported in the source.
- o. WX5 is weather code 5, coded as follows: 2 = Equatorial (climate), 1 = Desert, 0 = Temperate, -9 = Not reported in the source.
- p. SURPA is the relative surprise achieved by the attacker over the defender, coded as follows: 3 = Complete surprise achieved by the attacker, 2 = Substantial surprise achieved by the attacker, 1 = Minor surprise achieved by the attacker, 0 = Neither side achieved surprise, or it did not affect the outcome, -1 = Minor surprise achieved by the defender, -2 = Substantial surprise achieved by the defender, -3 = Complete surprise achieved by the defender, -9 = Not reported in the source.
- q. AEROA is the attacker's relative general air superiority in the theater, coded as follows: 1 = Attacker had air superiority in the theater, 0 = Neither side had air superiority, -1 = Defender had air superiority in the theater, -9 = Not reported in the source.
- r. STRA is the attacker's total personnel strength committed to the battle. STRD is the corresponding item for the defender.
- s. CODEA is the attacker's personnel strength code, coded as follows: 3 = Total strength is the sum of the initial strength and all replacements/reinforcements received over the course of the battle, 2 = Total strength is an average daily strength over the course of the battle, 1 = Total strength is in fact the initial strength, 0 = Not reported in the source. CODED is the corresponding item for the defender.
- t. INTSTA is the attacker's initial personnel strength (-1 if unknown). INTSTD is the corresponding item for the defender.
- u. RERPA is the attacker's personnel reinforcements/replacements received over the course of the battle (-1 if unknown). RERPD is the corresponding item for the defender.
- v. CASA is the attacker's personnel battle casualties (KIA, WIA, MIA, and POW) over the course of the battle (-1 if unknown). CASD is the corresponding item for the defender.
- w. FINSTA is the attacker's final personnel strength at the end of the battle (-1 if unknown). FINSTD is the corresponding item for the defender.

x. KMDA is the distance to which the attacker advanced beyond the defender's initial frontline (negative if the attacker is thrown back), in km. If unknown, it is coded as -9999.

v. ACHA is the adjudged attacker's mission achievement score on a scale of 1 () to 10 (high), or 0 if not given in the source. ACHD is the corresponding item for the defender.

z. WINA is the side that won the battle, coded as follows: 1 = Attacker won, 0 = Battle was a draw, -1 = Defender won.

aa. CRIT is the criterion on which WINA is assessed, coded as follows: 1 = Which side won is clear-cut, 2 = Win awarded to the side that on balance best achieved its objectives, 0 = Not given in the source.

ab. PRIA1 is the attacker's primary tactical scheme, coded as follows: 5 = River crossing, 4 = Penetration, 3 = Frontal attack, 2 = Double envelopment, 1 = Single envelopment, 0 = Feint, demonstration, or holding attack, -1 = Defensive plan, -2 = Defensive/offensive plan, -9 = Not reported in the source. PRID1 is the corresponding item for the defender.

ac. BATDURN is the duration of the battle from the beginning of its first active period to the end of its last active period, in days.

ad. SUMATP is the sum of the durations of the individual active periods over the course of the battle, in days.

ae. ATPCODE is coded as 1 if the actual time of day at which the active time periods began and ended are given in the source, 0 otherwise. (Unless the actual times of day at which the active periods began and ended are recorded, the values of SUMATP and of BATDURN will be inaccurate. In fact, they will be larger than the corresponding true values. Rates based on inflated SUMATP or BATDURN times will, of course, be biased downward from their true values.)

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BATTLE SEQ. NO.	BATTLE NAME	BATTLE DATE	WIDTH FRONT ATK	WIDTH FRONT DEF	DEF POST	TER- RAIN CODE 1	TER- RAIN CODE 2	TER- RAIN CODE 3	WEA- THER CODE 1	WEA- THER CODE 2	WEA- THER CODE 3	WEA- THER CODE 4	WEA- THER CODE 5	SUR- PRISE CODE	AIR SUPER- IORITY
SEQNO	NAME	DATE	WOFA1	WOFD1	POST1	TERRA1	TERRA2	TERRA3	WX1	WX2	WX3	WX4	WX5	SURPA	AEROA
43	THE BOYNE	1690.5260	8.00	5.00	0	1	1	-9	0	0	0	2	0	0	0
44	AUGHRIM	1691.5562	6.40	4.80	0	1	1	-9	0	0	0	2	0	0	0
45	STEENKERKE	1692.5890	2.40	5.20	0	2	1	-9	1	2	0	2	0	0	0
46	NEERWINDEN (LANDEN)	1693.5753	5.70	8.60	0	1	1	-9	0	0	0	2	0	0	0
47	MARSAGLIA	1693.7589	-1.00	-1.00	0	1	1	-9	0	0	0	3	0	0	0
48	ZENTA	1697.6959	4.20	2.70	1	0	1	-9	0	0	0	3	0	1	0
49	POLTAVA	1709.4904	1.20	3.20	1	1	1	-9	0	0	0	2	0	0	0
50	BLLENHEIM	1704.6165	6.40	7.10	0	1	1	-9	0	0	0	2	0	0	0
51	RAMILLIES	1706.3917	4.80	5.20	0	1	1	-9	0	0	0	1	0	0	0
52	QUENARDE	1708.5260	6.40	6.00	0	1	1	-9	0	0	0	2	0	0	0
53	MALPLAQUET	1709.6959	8.20	8.80	1	1	1	-9	0	0	0	3	0	0	0
54	PETERVARDEIN	1716.5945	-1.00	-1.00	0	1	1	-9	0	0	0	2	0	0	0
55	MOLLWITZ	1741.2739	2.70	4.30	0	1	1	-9	1	2	-1	1	0	0	0
56	CHOTUSITZ	1742.3754	3.40	3.70	0	1	1	-9	0	0	0	1	0	1	0
57	DETTINGEN	1743.4877	2.30	2.20	0	1	1	-9	0	0	0	2	0	0	0
58	FONTENOY	1745.3589	2.80	4.00	0	1	1	-9	0	0	0	1	0	0	0
59	HOHENFRIEDBERG	1745.4247	4.80	5.50	0	1	1	-9	0	0	0	2	0	1	0
60	SOOR	1745.7479	3.50	3.20	0	1	1	-9	0	0	0	3	0	0	0
61	KESELDORF	1745.9534	4.40	3.00	0	1	1	-9	0	0	0	0	0	2	0
62	PRESTONPANS	1745.7233	0.60	0.80	0	1	1	-9	0	0	0	3	0	2	0
63	CULLODEN	1746.2904	0.70	1.50	0	1	1	-9	1	2	-1	1	0	0	0
64	LOBOSITZ	1756.7507	3.20	5.60	0	1	1	-9	0	0	0	3	0	0	0
65	PRAGUE	1757.3452	4.80	5.20	0	1	1	-9	0	0	0	2	0	0	0
66	PLASSEY	1757.4767	3.20	0.70	0	1	1	-9	1	3	0	2	2	0	0
67	KOLIN	1757.4630	5.20	6.40	0	1	1	-9	0	0	0	2	0	0	0
68	HASTENBECK	1757.5671	5.50	10.00	1	1	1	-9	0	0	1	2	0	0	0
69	ROSSBACH	1757.8466	2.70	4.00	0	1	1	-9	0	0	0	3	0	-2	0
70	LEUTHEN	1757.9287	4.30	7.60	0	1	1	-9	1	2	0	0	0	2	0
71	CREFELD	1758.4767	10.50	7.50	0	0	1	-9	0	0	0	2	0	1	0
72	ZORNDORF	1758.6493	3.40	4.80	0	1	1	-9	0	0	0	2	0	0	0
73	HOCHKIRCH	1758.7863	5.60	4.20	1	1	1	-9	1	2	0	3	0	2	0
74	BERGEN	1759.2822	3.20	3.20	0	1	1	-9	0	0	0	2	0	0	0
75	MINDEN	1759.5836	4.00	4.00	0	1	1	-9	1	3	0	3	0	0	0
76	KUNERSDORF	1759.6136	5.40	6.40	1	1	0	-9	0	0	1	2	0	0	0
77	PLAINS OF ABRAHAM (QUEBEC)	1759.7014	1.00	1.20	0	1	1	-9	0	0	0	3	0	0	0
78	MAXEN	1759.8877	-1.00	-1.00	0	1	1	-9	0	0	0	3	0	0	0
79	WARBURG	1760.5808	5.00	6.40	0	1	1	-9	1	2	0	2	0	2	0
80	LIEGNITZ	1760.6219	2.40	4.00	0	1	1	-9	0	0	0	2	0	0	0
81	TORGAU	1760.8411	8.00	11.40	1	1	1	-9	1	2	-1	3	0	0	0
82	BUNKER HILL	1775.4603	0.50	0.70	0	1	1	-9	0	0	0	2	0	0	0
83	QUEBEC	1776.0000	0.20	0.20	2	-9	-9	2	1	2	-1	0	0	0	0
84	WHITE PLAINS	1776.8247	2.40	2.80	0	1	1	-9	0	0	0	3	0	0	0

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BATTLE SEQ. NO.	BATTLE NAME	BATTLE DATE	WIDTH FRONT ATK	WIDTH FRONT DEF	DEF POST	TER RAIN CODE	TER RAIN CODE	TER RAIN CODE	WEA- TERRA1 CODE	WEA- TERRA2 CODE	WEA- TERRA3 CODE	WEA- WX1 CODE	WEA- WX2 CODE	WEA- WX3 CODE	WEA- WX4 CODE	WEA- WX5 CODE	SUR- PRISE CODE	AIR SUPER- TORITY
SEQNO	NAME	DATE	WOFD1	WOFD1	POST1	TERRA1	TERRA2	TERRA3	WX1	WX2	WX3	WX4	WX5	SURPA	AEROA			
127	WAGRAM	1809.5096	24.00	24.00	0	1	1	-9	0	0	0	0	2	0	1	0		
128	TALavera	1809.5726	4.80	4.80	1	1	1	-9	0	0	0	0	2	0	0	0		
129	BUSSACO	1810.7397	12.00	12.00	0	2	0	-9	0	0	0	0	3	0	0	0		
130	FUENTES DE ONORO	1811.3424	6.40	6.40	1	-9	-9	2	0	0	0	1	0	0	0	0		
131	ALBUERA	1811.3726	4.80	4.80	0	1	1	-9	0	0	0	0	2	0	0	0		
132	SALAMANCA	1812.5562	6.40	6.00	0	1	1	-9	0	0	0	0	2	0	0	0		
133	VITTORIA	1813.4712	11.00	11.00	0	1	1	-9	0	0	0	0	2	0	0	0		
134	BORODINO	1812.6849	6.00	7.60	0	1	1	-9	0	0	0	0	3	0	0	0		
135	LUETZEN	1813.3342	8.00	8.00	0	1	1	-9	0	0	0	0	1	0	1	0		
136	BAUTZEN	1813.3835	9.60	11.20	0	1	1	-9	1	2	0	1	0	0	0	0		
137	DRESDEN	1813.6521	13.00	13.00	0	1	1	-9	0	0	0	0	2	0	0	0		
138	LEIPZIG	1813.7917	13.60	20.80	0	1	1	-9	0	0	0	0	3	0	1	0		
139	HANAU	1813.8301	1.60	3.20	0	1	1	-9	0	0	0	0	3	0	0	0		
140	LA ROTHIERE	1814.0876	4.80	9.60	0	1	1	-9	1	3	0	0	0	1	0	0		
141	LAON	1814.1863	6.40	10.40	0	1	1	-9	0	0	0	0	1	0	-2	0		
142	ARCIS-SUR-AUBE	1814.2164	4.80	4.80	0	1	1	-9	0	0	0	0	1	0	2	0		
143	LIGNY	1815.4575	12.00	12.00	0	1	1	-9	1	2	0	2	0	0	0	0		
144	QUATRE BRAS	1815.4575	5.00	5.00	0	1	1	-9	1	2	0	2	0	0	0	0		
145	WATERLOO	1815.4630	4.00	6.40	0	1	1	-9	1	2	0	2	0	0	-2	0		
146	THE THAMES	1813.7616	0.20	0.20	0	0	2	-9	0	0	0	0	3	0	0	0		
147	CHIPPEWA	1814.5096	1.60	1.60	0	1	1	-9	0	0	0	0	2	0	0	0		
148	LUNDY'S LANE	1814.5643	0.50	0.70	0	1	1	-9	0	0	0	0	2	0	0	0		
149	NEW ORLEANS	1815.0220	2.30	3.00	1	0	1	-9	0	0	0	0	0	0	0	0		
150	BOYACA	1819.6000	1.50	1.50	0	1	1	-9	0	0	0	0	0	0	0	0		
151	CARABOBO	1821.4822	3.20	2.50	0	1	1	-9	0	0	0	0	0	0	0	0		
152	BOMBONA	1822.2657	7.50	7.50	0	2	1	-9	0	0	0	0	3	0	0	0		
153	PICHINCHA	1822.3945	1.00	1.00	0	2	1	-9	0	0	0	0	3	0	0	0		
154	JUNIN	1824.5973	1.40	1.40	0	0	1	-9	0	0	0	0	0	0	0	0		
155	AYACUCHO	1824.9397	4.50	4.50	0	1	1	-9	0	0	0	0	2	0	0	0		
156	SAN JACINTO	1836.3041	0.30	0.20	0	0	1	-9	0	0	0	0	1	0	3	0		
157	PALO ALTO	1846.3507	1.20	1.60	0	0	0	-9	0	0	0	1	1	0	0	0		
158	RESACA DE LA PALMA	1846.3534	1.90	2.70	0	0	1	-9	0	0	1	1	1	0	0	0		
159	BUENA VISTA	1847.1453	7.00	13.00	0	2	0	-9	1	2	0	0	0	0	0	0		
160	CERRO GORDO	1847.2931	2.40	4.00	1	2	1	-9	0	0	1	1	0	2	0	0		
161	CONTRERAS	1847.6356	2.50	2.70	1	2	0	-9	0	0	1	2	0	0	2	0		
162	CHURUBUSCO	1847.6356	2.00	1.10	1	0	0	-9	0	0	1	2	0	0	0	0		
163	MOLINO DEL REY	1847.6876	1.60	1.00	1	1	1	-9	0	0	1	3	0	0	0	0		
164	CHAPULTEPEC	1847.7014	1.80	3.50	2	2	1	-9	0	0	1	3	0	0	0	0		
165	THE ALMA	1854.7206	10.00	11.00	0	1	0	-9	0	0	1	3	0	0	0	0		
166	INKERMAN	1854.8466	2.50	2.50	1	1	0	-9	1	3	-1	3	0	0	1	0		
167	MAGENTA	1859.4247	8.00	6.00	0	0	0	-9	0	0	0	1	2	0	0	0		
168	SOLFERINO	1859.4795	11.00	11.00	0	1	1	-9	0	0	1	2	0	0	0	0		

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BATTLE SEQ. NO.	BATTLE NAME	BATTLE DATE	WIDTH FRONT DEF	WIDTH FRONT ATK	DEF POST	TER- RAIN CODE	TER- RAIN CODE	TER- RAIN CODE	WEA- TERRA1 WX1	WEA- TERRA2 WX2	WEA- TERRA3 WX3	WEA- TERRA4 WX4	WEA- TERRA5 WX5	SUR- PRISE CODE	AIR SUPER- IORITY
SEQNO	NAME	DATE	WOFD1	WOFA1	POST1	TERRA1	TERRA2	TERRA3	WX1	WX2	WX3	WX4	WX5	SURPA	AEROA
295	GOLICE-TARNOW (OPENING PHASE)	1915.3342	121.00	121.00	1	1	1	-9	0	0	0	1	0	2	0
296	FIRST ISONZO	1915.4767	16.00	16.00	2	2	1	-9	0	0	0	2	0	0	0
297	SECOND ISONZO	1915.5452	29.00	29.00	2	2	1	-9	0	0	0	2	0	0	0
298	THIRD ISONZO	1915.7972	29.00	29.00	2	2	1	-9	0	0	-1	3	0	0	0
299	FOURTH ISONZO	1915.8602	29.00	29.00	2	2	1	-9	0	0	-1	3	0	0	0
300	FIRST DARDANELLES LANDING	1915.3151	11.20	11.20	1	2	0	-9	0	0	0	1	0	0	0
301	SUVLA BAY	1915.6000	4.80	4.80	0	2	0	-9	0	0	0	2	0	1	0
302	KUT-EL-AMARA	1915.7397	16.00	16.00	2	0	0	-9	0	0	0	3	0	1	0
303	CTESIPHON	1915.8932	12.10	16.00	2	0	1	-9	0	0	0	3	0	0	1
304	FIRST SOMME	1916.4987	62.40	62.40	2	1	1	-9	1	3	0	2	0	0	1
305	SOMME-FOURTH ARMY ATTACK	1916.4987	19.20	19.20	2	1	1	-9	0	0	0	2	0	0	1
306	SOMME-OVILLERS	1916.5343	4.50	4.50	2	1	1	-9	0	0	0	2	0	0	1
307	SOMME-BAZENTIN RIDGE	1916.7069	9.60	9.60	2	1	1	-9	0	0	0	3	0	2	1
308	SOMME-FLERS-COURCELETTE	1916.0273	110.00	110.00	2	2	1	-9	1	3	-1	0	0	3	0
309	CAUCASUS WINTER OFFENSIVE	1916.2109	20.00	20.00	1	1	1	-9	0	0	0	1	0	0	0
310	LAKE NAROTCH	1916.4247	400.00	400.00	1	1	1	-9	0	0	0	2	0	2	0
311	1916 BRUSILOV OFFENSIVE	1916.1918	48.00	48.00	2	2	1	-9	1	3	-1	1	0	0	0
312	FIFTH ISONZO	1916.3699	48.00	48.00	0	2	1	-9	0	0	0	1	0	0	0
313	ASIAGO	1916.4575	48.00	48.00	0	2	0	-9	0	0	0	2	0	0	0
314	TRENTINO COUNTER-OFFENSIVE	1916.5973	22.50	22.50	2	2	1	-9	0	0	0	2	0	1	0
315	SIXTH ISONZO (GORITZIA)	1917.2712	32.00	32.00	2	1	1	-9	0	0	0	1	0	1	1
316	ARRAS	1917.2904	64.00	64.00	2	1	1	-9	1	3	0	1	0	0	0
317	ATENE II	1917.4329	19.00	19.00	2	2	1	-9	0	0	0	2	0	1	1
318	MESSINES	1917.8877	48.00	48.00	2	1	1	-9	0	0	0	3	0	2	0
319	YPRES III	1917.9150	22.00	22.00	1	1	1	-9	0	0	0	3	0	1	0
320	CAMBRAI I	1917.3617	25.00	25.00	2	2	0	-9	0	0	0	1	0	0	0
321	CAMBRAI II	1917.6301	30.00	30.00	2	2	0	-9	0	0	0	2	0	0	0
322	TENTH ISONZO	1917.8137	160.00	160.00	2	2	0	-9	0	0	0	3	0	1	0
323	ELEVENTH ISONZO	1917.1453	7.20	40.00	1	0	0	-9	0	0	0	0	0	0	1
324	CAPORETTO	1917.2329	12.00	19.20	1	1	1	-9	0	0	0	1	0	0	1
325	TIGRIS CROSSING	1917.2931	24.00	24.00	2	0	1	-9	0	0	0	1	0	0	1
326	GAZA I	1917.8329	32.00	48.00	2	1	1	-9	0	0	0	3	0	2	1
327	GAZA II	1917.8685	24.00	24.00	1	1	1	-9	0	0	0	3	0	0	1
328	GAZA III	1918.2192	97.00	97.00	2	1	1	-9	1	3	0	1	0	2	-1
329	JUNCTION STATION	1918.2356	140.00	140.00	2	1	1	-9	1	3	0	1	0	0	-1
330	SECOND SOMME-PHASE I (SOMME-PERONNE)	1918.2712	32.00	32.00	2	0	1	-9	1	3	0	1	0	1	-1
331	SECOND SOMME-PHASE II (SOMME-MONTDIDIER)	1918.2849	0.30	0.30	2	2	1	-9	0	0	0	1	0	2	0
332	LYS	1918.4027	56.30	56.30	2	2	1	-9	0	0	0	1	0	2	-1
333	YVONNE & ODETTE POSITIONS (SECTOR TOULON)	1918.4055	1.50	1.50	2	1	1	-9	0	1	0	1	0	2	-1
334	CHEMIN-DES-DAMES	1918.4302	4.40	4.40	0	2	2	-9	0	0	0	2	0	0	0
335	CANTIGNY														
336	BELLEAU WOOD														

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BATTLE SEQ. NO.	BATTLE NAME	BATTLE DATE	WIDTH FRONT ATK	WIDTH DEF	DEF POST	TER- RAIN CODE	TER- RAIN CODE	TER- RAIN CODE	TER- RAIN CODE	WEA- TERRA2 CODE	WEA- TERRA3 CODE	WEA- TERRA4 CODE	WEA- TERRA5 CODE	WEA- TERRA6 CODE	WEA- TERRA7 CODE	WEA- TERRA8 CODE	WEA- TERRA9 CODE	WEA- TERRA10 CODE	WEA- TERRA11 CODE	WEA- TERRA12 CODE	WEA- TERRA13 CODE	WEA- TERRA14 CODE	WEA- TERRA15 CODE	WEA- TERRA16 CODE	WEA- TERRA17 CODE	WEA- TERRA18 CODE	WEA- TERRA19 CODE	WEA- TERRA20 CODE	WEA- TERRA21 CODE	WEA- TERRA22 CODE	WEA- TERRA23 CODE	WEA- TERRA24 CODE	WEA- TERRA25 CODE	WEA- TERRA26 CODE	WEA- TERRA27 CODE	WEA- TERRA28 CODE	WEA- TERRA29 CODE	WEA- TERRA30 CODE	WEA- TERRA31 CODE	WEA- TERRA32 CODE	WEA- TERRA33 CODE	WEA- TERRA34 CODE	WEA- TERRA35 CODE	WEA- TERRA36 CODE	WEA- TERRA37 CODE	WEA- TERRA38 CODE	WEA- TERRA39 CODE	WEA- TERRA40 CODE	WEA- TERRA41 CODE	WEA- TERRA42 CODE	WEA- TERRA43 CODE	WEA- TERRA44 CODE	WEA- TERRA45 CODE	WEA- TERRA46 CODE	WEA- TERRA47 CODE	WEA- TERRA48 CODE	WEA- TERRA49 CODE	WEA- TERRA50 CODE	WEA- TERRA51 CODE	WEA- TERRA52 CODE	WEA- TERRA53 CODE	WEA- TERRA54 CODE	WEA- TERRA55 CODE	WEA- TERRA56 CODE	WEA- TERRA57 CODE	WEA- TERRA58 CODE	WEA- TERRA59 CODE	WEA- TERRA60 CODE	WEA- TERRA61 CODE	WEA- TERRA62 CODE	WEA- TERRA63 CODE	WEA- TERRA64 CODE	WEA- TERRA65 CODE	WEA- TERRA66 CODE	WEA- TERRA67 CODE	WEA- TERRA68 CODE	WEA- TERRA69 CODE	WEA- TERRA70 CODE	WEA- TERRA71 CODE	WEA- TERRA72 CODE	WEA- TERRA73 CODE	WEA- TERRA74 CODE	WEA- TERRA75 CODE	WEA- TERRA76 CODE	WEA- TERRA77 CODE	WEA- TERRA78 CODE	WEA- TERRA79 CODE	WEA- TERRA80 CODE	WEA- TERRA81 CODE	WEA- TERRA82 CODE	WEA- TERRA83 CODE	WEA- TERRA84 CODE	WEA- TERRA85 CODE	WEA- TERRA86 CODE	WEA- TERRA87 CODE	WEA- TERRA88 CODE	WEA- TERRA89 CODE	WEA- TERRA90 CODE	WEA- TERRA91 CODE	WEA- TERRA92 CODE	WEA- TERRA93 CODE	WEA- TERRA94 CODE	WEA- TERRA95 CODE	WEA- TERRA96 CODE	WEA- TERRA97 CODE	WEA- TERRA98 CODE	WEA- TERRA99 CODE	WEA- TERRA100 CODE	WEA- TERRA101 CODE	WEA- TERRA102 CODE	WEA- TERRA103 CODE	WEA- TERRA104 CODE	WEA- TERRA105 CODE	WEA- TERRA106 CODE	WEA- TERRA107 CODE	WEA- TERRA108 CODE	WEA- TERRA109 CODE	WEA- TERRA110 CODE	WEA- TERRA111 CODE	WEA- TERRA112 CODE	WEA- TERRA113 CODE	WEA- TERRA114 CODE	WEA- TERRA115 CODE	WEA- TERRA116 CODE	WEA- TERRA117 CODE	WEA- TERRA118 CODE	WEA- TERRA119 CODE	WEA- TERRA120 CODE	WEA- TERRA121 CODE	WEA- TERRA122 CODE	WEA- TERRA123 CODE	WEA- TERRA124 CODE	WEA- TERRA125 CODE	WEA- TERRA126 CODE	WEA- TERRA127 CODE	WEA- TERRA128 CODE	WEA- TERRA129 CODE	WEA- TERRA130 CODE	WEA- TERRA131 CODE	WEA- TERRA132 CODE	WEA- TERRA133 CODE	WEA- TERRA134 CODE	WEA- TERRA135 CODE	WEA- TERRA136 CODE	WEA- TERRA137 CODE	WEA- TERRA138 CODE	WEA- TERRA139 CODE	WEA- TERRA140 CODE	WEA- TERRA141 CODE	WEA- TERRA142 CODE	WEA- TERRA143 CODE	WEA- TERRA144 CODE	WEA- TERRA145 CODE	WEA- TERRA146 CODE	WEA- TERRA147 CODE	WEA- TERRA148 CODE	WEA- TERRA149 CODE	WEA- TERRA150 CODE	WEA- TERRA151 CODE	WEA- TERRA152 CODE	WEA- TERRA153 CODE	WEA- TERRA154 CODE	WEA- TERRA155 CODE	WEA- TERRA156 CODE	WEA- TERRA157 CODE	WEA- TERRA158 CODE	WEA- TERRA159 CODE	WEA- TERRA160 CODE	WEA- TERRA161 CODE	WEA- TERRA162 CODE	WEA- TERRA163 CODE	WEA- TERRA164 CODE	WEA- TERRA165 CODE	WEA- TERRA166 CODE	WEA- TERRA167 CODE	WEA- TERRA168 CODE	WEA- TERRA169 CODE	WEA- TERRA170 CODE	WEA- TERRA171 CODE	WEA- TERRA172 CODE	WEA- TERRA173 CODE	WEA- TERRA174 CODE	WEA- TERRA175 CODE	WEA- TERRA176 CODE	WEA- TERRA177 CODE	WEA- TERRA178 CODE	WEA- TERRA179 CODE	WEA- TERRA180 CODE	WEA- TERRA181 CODE	WEA- TERRA182 CODE	WEA- TERRA183 CODE	WEA- TERRA184 CODE	WEA- TERRA185 CODE	WEA- TERRA186 CODE	WEA- TERRA187 CODE	WEA- TERRA188 CODE	WEA- TERRA189 CODE	WEA- TERRA190 CODE	WEA- TERRA191 CODE	WEA- TERRA192 CODE	WEA- TERRA193 CODE	WEA- TERRA194 CODE	WEA- TERRA195 CODE	WEA- TERRA196 CODE	WEA- TERRA197 CODE	WEA- TERRA198 CODE	WEA- TERRA199 CODE	WEA- TERRA200 CODE	WEA- TERRA201 CODE	WEA- TERRA202 CODE	WEA- TERRA203 CODE	WEA- TERRA204 CODE	WEA- TERRA
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PART 11 OF 48

BATTLE SEQ. NO.	BATTLE NAME	BATTLE DATE	WIDTH FRONT ATK	WIDTH FRONT DEF	DEF POST	TER- RAIN CODE	TER- RAIN CODE	TER- RAIN CODE	TERRA1 WX1	TERRA2 WX2	WEA- THER CODE	WEA- THER CODE	WEA- THER CODE	WEA- THER CODE	WEA- THER CODE	SUR- PRISE CODE	AIR SUPER- IORITY
SEQNO	NAME	DATE	WOFA1	WOFD1	POST1	TERRA1 WX1	TERRA2 WX2	TERRA3 WX3	WX1	WX2	WX3	WX4	WX5	SURPA	AEROA		
421	MONTE CAMINO III	1943.9205	2.00	2.00	2	2	1	-9	1	2	0	3	0	0	1		
422	MONTE MAGGIORE	1943.9205	1.00	1.00	2	2	1	-9	1	3	0	3	0	0	1		
423	APRILIA I	1944.0685	7.00	7.00	0	0	1	-9	1	3	0	0	0	1	1		
424	THE FACTORY	1944.0740	7.00	7.00	0	0	1	-9	0	0	-1	0	0	0	-1		
425	CAMPOLEONE	1944.0795	11.00	11.00	1	0	1	-9	0	0	-1	0	0	0	1		
426	CAMPOLEONE COUNTERATTACK	1944.0931	11.00	11.00	1	0	1	-9	0	0	0	0	0	0	-1		
427	CAROCETO	1944.1041	8.00	8.00	1	0	1	-9	0	0	-1	0	0	0	-1		
428	MOLETTA RIVER DEFENSE	1944.1041	3.20	3.20	1	0	1	-9	0	0	-1	0	0	0	-1		
429	APRILIA II	1944.1068	2.00	2.00	1	0	1	-9	0	0	-1	0	0	0	-1		
430	FACTORY COUNTERATTACK	1944.1151	2.00	2.00	2	0	1	-9	1	2	0	0	0	0	1		
431	BOWLING ALLEY	1944.1288	9.60	9.60	2	0	1	-9	0	0	0	0	0	2	-1		
432	MOLETTA RIVER II	1944.1288	4.00	4.00	2	0	1	-9	0	0	-1	0	0	2	-1		
433	FIOCCIA	1944.1425	8.00	8.00	2	1	1	-9	1	2	0	0	0	0	-1		
434	SANTA MARIA INFANTE	1944.3589	7.50	7.50	2	2	0	-9	0	0	0	1	0	1	1		
435	SAN MARTINO	1944.3589	5.50	5.50	2	2	0	-9	0	0	0	1	0	0	1		
436	CASTELLONORATO	1944.3671	5.00	5.00	2	2	0	-9	0	0	0	1	0	0	1		
437	SPIGNO	1944.3671	5.50	5.50	-1	2	0	-9	0	0	0	1	0	0	1		
438	FORMIA	1944.3726	4.00	4.00	-1	2	0	-9	0	0	0	1	0	0	1		
439	MONTE GRANDE (ROME)	1944.3754	9.00	9.00	0	1	1	-9	0	0	0	1	0	0	1		
440	ITRI-FONDI	1944.3835	6.00	6.00	-1	2	1	-9	0	0	0	1	0	0	1		
441	TERRACINA	1944.3890	15.00	15.00	0	2	1	-9	0	0	0	1	0	0	1		
442	MOLETTA OFFENSIVE	1944.3917	8.50	8.50	2	0	1	-9	1	2	0	1	0	0	1		
443	ANZIO-ALBANO ROAD	1944.3917	6.00	6.00	2	0	1	-9	1	2	0	1	0	0	1		
444	ANZIO BREAKOUT	1944.3917	5.60	5.60	2	0	1	-9	1	2	0	1	0	2	1		
445	CISTERNA	1944.3917	7.80	7.80	2	0	1	-9	1	2	0	1	0	2	1		
446	SEZZE	1944.3972	14.00	14.00	-2	1	1	-9	0	0	0	1	0	0	1		
447	VELLETRI	1944.4000	14.00	14.00	2	1	1	-9	0	0	0	1	0	-1	1		
448	CAMPOLEONE	1944.4000	6.50	6.50	2	1	1	-9	0	0	0	1	0	0	1		
449	VILLA CROCCETTA	1944.4027	5.00	5.00	2	1	1	-9	0	0	0	1	0	0	1		
450	ARDEA	1944.4055	9.00	9.00	2	1	1	-9	0	0	0	1	0	0	1		
451	FOSSO DI CAMPOLEONE	1944.4082	11.00	11.00	2	1	1	-9	0	0	0	1	0	0	1		
452	LANUVIO	1944.4082	3.00	3.00	2	1	1	-9	0	0	0	1	0	0	1		
453	LARIANO	1944.4164	5.00	5.00	1	1	1	-9	0	0	0	2	0	0	1		
454	VIA ANZIATE	1944.4164	4.00	4.00	2	1	0	-9	0	0	0	2	0	0	1		
455	VALMONTONE	1944.4164	5.50	5.50	0	1	1	-9	0	0	0	2	0	0	1		
456	TARTO-TIBER	1944.4219	7.00	7.00	2	0	1	-9	0	0	0	2	0	0	1		
457	IL GIOGIO PASS	1944.7014	4.00	4.00	2	1	1	-9	0	0	0	3	0	0	1		
458	ST. LO	1944.5260	12.00	12.00	2	1	1	-9	0	1	0	2	0	0	1		
459	OPERATION GOODWOOD	1944.5452	21.00	21.00	2	1	1	-9	0	0	0	2	0	1	1		
460	OPERATION COBRA	1944.5616	11.00	11.00	2	1	1	-9	0	0	0	2	0	0	1		
461	MORTAIN	1944.6000	9.00	9.00	0	1	1	-9	0	0	0	2	0	2	-1		
462	CHARTRES	1944.6246	5.00	5.00	0	1	1	-9	0	0	0	2	0	0	1		

CDB90

BATTLE SEQ. NO.	BATTLE NAME	BATTLE DATE	WIDTH FRONT ATK	WIDTH POST DEF	DEF POST	TER- RAIN CODE	TER- RAIN CODE	TERRA1	TERRA2	TERRA3	WEA- THER CODE	WEA- THER CODE	WEA- THER CODE	WEA- THER CODE	WEA- THER CODE	SUR- PRISE CODE	AIR PRIORITY
SEONO	NAME	DATE	WOFA1	WOFD1	POST1	TERRA1	TERRA2	TERRA3	WX1	WX2	WX3	WX4	WX5	SURPA	AEROA		
463	MELUN	1944.6438	5.00	5.00	1	1	1	-9	1	2	0	2	0	0	1		
464	SEINE RIVER	1944.6438	45.00	45.00	1	1	1	-9	1	2	0	2	0	0	1		
465	MOSELLE-METZ	1944.6823	25.00	25.00	-1	1	1	-9	1	2	0	3	0	0	1		
466	METZ	1944.7014	25.00	25.00	2	1	1	-9	1	2	0	3	0	0	1		
467	ARRACOURT	1944.7178	10.40	10.40	0	1	1	-9	1	2	0	3	0	0	-1		
468	WESTWALL	1944.7534	12.50	12.50	2	1	1	-9	1	2	0	3	0	0	1		
469	SCHMIDT	1944.8384	9.50	9.50	2	1	1	-9	1	2	0	3	0	0	1		
470	SEILLE-NIED	1944.8547	48.00	48.00	2	1	1	-9	1	3	-1	3	0	1	1		
471	FORET DE CHATEAU-SALINS	1944.8602	16.60	16.60	2	1	1	-9	1	3	-1	3	0	0	1		
472	MORHANGE	1944.8685	7.70	7.70	1	1	1	-9	1	2	-1	3	0	0	1		
473	MORHANGE - FAULQUEMONT	1944.8685	49.00	49.00	2	1	1	-9	1	2	-1	3	0	0	1		
474	BOURGALTROFF	1944.8712	11.30	11.30	1	1	1	-9	1	2	-1	3	0	0	1		
475	SARRE-ST. AVOUD	1944.8877	64.00	64.00	1	1	1	-9	0	1	-1	3	0	0	1		
476	BAERENDORF I	1944.8987	3.50	3.50	0	1	1	-9	0	1	-1	3	0	0	1		
477	BAERENDORF II	1944.9041	11.30	11.30	1	1	1	-9	0	1	-1	3	0	0	1		
478	BURBACH-DURSTEL	1944.9069	11.30	11.30	1	1	1	-9	1	2	-1	3	0	0	1		
479	DURSTEL - FAERBERSVILLER	1944.9095	51.20	51.20	1	1	1	-9	1	2	-1	3	0	0	1		
480	SARRE-UNION	1944.9178	4.50	4.50	1	1	1	-9	0	1	0	0	0	0	1		
481	SARRE-SINGLING	1944.9315	32.00	32.00	-1	1	1	-9	0	1	0	3	0	0	1		
482	SINGLING-BINING	1944.9315	3.60	3.60	2	1	1	-9	1	2	-1	3	0	0	1		
483	SAUER RIVER	1944.9589	14.50	14.50	0	2	1	-9	1	3	-1	0	0	2	-1		
484	ST. VITH	1944.9617	12.00	12.00	1	1	1	-9	1	2	-1	0	0	0	-1		
485	BASTOGNE	1944.9644	12.00	12.00	0	1	1	-9	1	2	-1	0	0	0	-1		
486	SEDAN-MEUSE RIVER	1940.3644	9.00	9.00	1	1	1	-9	0	0	0	2	0	2	1		
487	JITRA	1941.9480	8.00	8.00	0	1	2	-9	1	3	1	0	2	1	1		
488	ROVNO	1941.4740	65.00	65.00	1	1	1	-9	0	0	0	2	0	3	1		
489	DEFENSE OF MOSCOW	1941.7479	700.00	700.00	1	1	1	-9	0	0	-1	3	0	0	1		
490	MOSCOW COUNTEROFFENSIVE	1941.9287	1060.00	1060.00	0	1	1	-9	0	0	-1	0	0	2	0		
491	POGORELOYE GORODISHCHE	1942.5918	36.00	36.00	1	0	2	-9	0	0	0	2	0	1	-1		
492	LENINGRAD	1943.0328	13.00	13.00	2	0	1	-9	1	2	-1	0	0	0	0		
493	OBOYAN-KURSK (PHASE I)	1943.5068	16.00	16.00	2	1	1	-9	0	0	0	2	0	0	1		
494	OPERATION CITADEL (SOUTHERN SECTOR)	1943.5096	30.00	30.00	1	1	1	-9	1	2	0	2	0	0	1		
495	OBOYAN-KURSK (PHASE II)	1943.5150	20.00	20.00	1	1	1	-9	0	0	0	2	0	0	0		
496	OBOYAN-KURSK (PHASE III)	1943.5260	25.00	25.00	1	1	1	-9	0	1	0	2	0	0	0		
497	PROKHOROVKA	1943.5288	25.00	25.00	0	1	1	-9	0	0	0	2	0	0	0		
498	KURSK COUNTEROFFENSIVE	1943.5890	250.00	250.00	1	1	1	-9	0	0	0	2	0	0	1		
499	BELGOROD	1943.5890	16.00	16.00	2	1	1	-9	0	0	0	2	0	0	0		
500	MELITOPOL	1943.7369	111.00	111.00	2	1	1	-9	0	0	0	3	0	0	1		
501	KORSUN-SCHEVCHENKOVSKIY	1944.0658	180.00	180.00	1	0	1	-9	1	3	-1	0	0	0	0		
502	NIKOPOL BRIDGEHEAD	1944.0850	12.00	12.00	2	1	1	-9	1	2	-1	0	0	0	1		
503	SEVASTOPOL	1944.3424	25.00	25.00	2	1	1	-9	0	0	0	1	0	0	1		
504	BEREZINA RIVER	1944.4822	10.00	10.00	0	0	2	1	0	0	0	2	0	0	1		

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BATTLE SEQ. NO.	BATTLE NAME	BATTLE DATE	WIDTH FRONT ATK	WIDTH FRONT DEF	DEF POST	TER- RAIN CODE 1	TERRA1 TERRA2 TERRA3 WX1	TER- RAIN CODE 2	TERRA2 TERRA3 TERRA3 WX2	WEA- THER CODE 1	WEA- THER CODE 2	WEA- THER CODE 3	WEA- THER CODE 4	WEA- THER CODE 5	SUR- PRISE CODE	AIR SUPER- IORITY
SEQNO	NAME	DATE	WOF1	WOF1	POST1	TERRA1 TERRA2 TERRA3 WX1	TER- RAIN CODE 1	TERRA1 TERRA2 TERRA3 WX2	WEA- THER CODE 1	WEA- THER CODE 2	WEA- THER CODE 3	WEA- THER CODE 4	WEA- THER CODE 5	SURPA AEROA		
589	NAFEKH	1973.7671	7.00	7.00	0	2	0	0	0	0	0	0	0	0	2	-1
590	TEL FARRIS	1973.7699	14.00	14.00	0	2	0	0	0	0	0	0	0	0	0	0
591	HUSHNIYAH	1973.7699	12.00	20.00	0	2	0	0	0	0	0	0	0	0	0	1
592	MOUNT HERMON I	1973.7699	7.50	7.50	2	2	0	0	0	0	0	0	0	0	0	-1
593	MOUNT HERMON I	1973.7699	1.00	1.00	2	2	0	0	0	0	0	0	0	0	0	1
594	TEL SHAMS	1973.7781	5.00	5.00	2	2	1	0	0	0	0	0	0	0	0	1
595	TEL SHAAR	1973.7781	3.00	3.00	1	2	0	0	0	0	0	0	0	0	0	1
596	TEL EL HARA	1973.7836	12.00	20.00	0	2	0	0	0	0	0	0	0	0	-2	-1
597	KFAR SHAMS-TEL ANTAR	1973.7891	20.00	20.00	0	2	0	0	0	0	0	0	0	0	2	1
598	NABA	1973.7917	9.00	9.00	1	2	0	0	0	0	0	0	0	0	0	-1
599	ARAB COUNTEROFFENSIVE	1973.8000	25.00	25.00	1	2	0	0	0	0	0	0	0	0	0	-1
600	MOUNT HERMON II	1973.8054	1.00	1.00	2	2	1	0	0	0	0	0	0	0	0	1
601	MOUNT HERMON III	1973.8082	2.00	2.00	2	2	1	0	0	0	0	0	0	0	0	1
602	SIDI BOU ZID I	1943.1233	22.00	22.00	0	0	0	0	0	0	0	0	0	0	2	1
603	SIDI BOU ZID II	1943.1260	4.00	4.00	0	0	0	0	0	0	0	0	0	0	0	-1
604	KASSERINE PASS	1943.1370	4.00	4.00	0	2	0	0	0	0	0	0	0	0	0	1
605	RAPIDO NORTH I	1944.0548	1.00	1.00	2	0	0	0	0	0	0	0	0	0	0	1
606	RAPIDO NORTH II	1944.0575	1.00	1.00	2	0	0	0	0	0	0	0	0	0	0	1
607	RAPIDO SOUTH I	1944.0548	1.00	1.00	2	0	0	0	0	0	0	0	0	0	0	1
608	RAPIDO SOUTH II	1944.0575	1.00	1.00	2	0	0	0	0	0	0	0	0	0	0	1
609	BOWLING ALLEY I	1944.1288	2.00	2.00	1	0	0	0	0	0	0	0	0	0	2	-1
610	BOWLING ALLEY II	1944.1288	2.40	2.40	1	0	0	0	0	0	0	0	0	0	2	-1
611	BOWLING ALLEY III	1944.1288	2.60	2.60	1	0	0	0	0	0	0	0	0	0	2	-1
612	MORTAIN I	1944.6000	2.00	2.00	0	1	0	0	0	0	0	0	0	0	2	-1
613	MORTAIN II	1944.6000	3.00	3.00	0	2	1	0	0	0	0	0	0	0	2	-1
614	SCHMIDT I	1944.8384	1.70	1.70	1	1	1	0	0	0	0	0	0	0	0	1
615	SCHMIDT II	1944.8384	2.00	2.00	1	2	2	0	0	0	0	0	0	0	0	1
616	SCHMIDT III	1944.8384	1.20	1.20	1	1	2	0	0	0	0	0	0	0	0	1
617	WAHLERSCHIED	1944.9507	1.00	1.00	1	1	2	0	0	0	0	0	0	0	0	1
618	KRINKELT-ROCHERATH I	1944.9617	2.50	2.50	0	2	2	0	0	0	0	0	0	0	0	-1
619	KRINKELT-ROCHERATH II	1944.9617	3.00	3.00	0	1	0	0	0	0	0	0	0	0	0	-1
620	SCHNEE EIFEL CENTER	1944.9589	1.00	1.00	1	2	2	0	0	0	0	0	0	0	3	-1
621	SCHNEE EIFEL SOUTH	1944.9589	9.00	9.00	1	2	2	0	0	0	0	0	0	0	3	-1
622	SCHNEE EIFEL NORTH I	1944.9589	6.00	6.00	0	1	1	0	0	0	0	0	0	0	3	-1
623	SCHNEE EIFEL NORTH II	1944.9589	1.00	1.00	1	2	2	0	0	0	0	0	0	0	3	-1
624	OUR RIVER CENTER	1944.9589	12.00	12.00	0	2	2	0	0	0	0	0	0	0	3	-1
625	OUR RIVER NORTH	1944.9589	4.00	4.00	0	2	2	0	0	0	0	0	0	0	3	-1
626	Pusan Perimeter	1950.7096	39.00	-1.00	0	-9	-9	0	0	0	0	0	0	0	0	9
627	Pusan Breakout	1950.7151	40.30	-1.00	-1	-9	-9	0	0	0	0	0	0	0	0	9
628	Nam River	1950.7261	52.00	-1.00	-1	-9	-9	0	0	0	0	0	0	0	0	9
629	Kunson	1950.7343	73.00	-1.00	-1	-9	-9	0	0	0	0	0	0	0	0	9
630	Butte Lir	1951.1041	19.00	-1.00	0	-9	-9	0	0	0	0	0	0	0	0	9

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BATTLE SEQ. NO.	BATTLE NAME	BATTLE DATE	WIDTH FRONT ATK	WIDTH FRONT DEF	DEF POST	TER- RAIN CODE 1	TER- RAIN CODE 2	TER- RAIN CODE 3	TER- RAIN CODE 3	WEA- THER CODE 1	WEA- THER CODE 2	WEA- THER CODE 3	WEA- THER CODE 4	WEA- THER CODE 5	SUR- PRISE AEROA	AIR SUPER- JORITY
SEQNO	NAME	DATE	WOFA1	WOFD1	POST1	TERRA1	TERRA2	TERRA3	WX1	WX2	WX3	WX4	WX5	SURPA	AEROA	
631	Han River	1951.1808	8.10	-1.00	1	-9	-9	-9	0	-9	0	1	0	0	0	9
632	Chan River	1951.2548	24.00	-1.00	0	-9	-9	-9	1	2	0	1	0	0	0	9
633	Pierce Line	1951.3014	24.00	-1.00	0	-9	-9	-9	1	2	0	1	0	0	0	9
634	Kansas Line	1951.3096	24.00	-1.00	-1	-9	-9	-9	1	2	0	1	0	0	0	9
635	Iron Triangle	1951.4164	32.00	-1.00	0	-9	-9	-9	1	3	0	2	0	0	0	9
636	Bayonette Line	1951.4219	32.00	-1.00	1	2	-9	-9	1	2	0	2	0	0	0	9
637	Targul Frumos	1944.3315	19.00	-1.00	-1	0	0	-9	1	2	0	1	0	0	0	9
638	Mishmar Hayarden 1	1948.4302	5.00	-1.00	1	0	1	-9	0	-9	1	2	1	0	0	9
639	Mishmar Hayarden 2	1948.5205	6.00	-1.00	0	0	1	-9	0	-9	1	2	1	0	0	9
640	Hiram	1948.8247	3.00	-1.00	1	1	0	-9	0	-9	1	3	1	0	0	9
641	Banias-Masaada	1967.4410	-1.00	-1.00	1	2	1	-9	0	-9	1	2	1	0	0	9
642	Boutmiya	1967.4410	-1.00	-1.00	1	2	1	-9	0	-9	1	2	1	0	0	9
643	Kuneitra	1967.4410	-1.00	-1.00	1	2	1	-9	0	-9	1	2	1	0	0	9
644	Tarto-Tiber	1944.3370	7.00	-1.00	2	0	1	-9	0	-9	0	1	0	0	0	9
645	Bekka Valley	1982.4357	26.00	-1.00	1	1	-1	-9	0	-9	1	2	1	0	0	9
646	Acre	1948.3644	2.00	-1.00	1	0	1	-9	0	-9	0	1	1	0	0	9
647	"Death to Invader"	1948.5343	-1.00	-1.00	1	1	0	-9	0	-9	1	2	1	0	0	9
648	El Auja "Avin"	1948.9835	2.00	-1.00	1	0	0	-9	0	-9	0	0	1	0	0	9
649	Ageila-Rafah "Avin"	1948.9918	2.00	-1.00	1	0	0	-9	0	-9	0	0	1	0	0	9
650	Abu Agelia-Um Katef	1956.8301	6.00	-1.00	2	0	0	-9	0	-9	1	3	1	0	0	9
651	Bir Rud Salim	1956.8356	-1.00	-1.00	2	0	0	-9	0	-9	1	3	1	0	0	9
652	Rafah-El Arish	1956.8356	6.00	-1.00	2	0	0	-9	0	-9	1	3	1	0	0	9
653	Gaza-Khan Yunis	1956.8384	5.00	-1.00	1	0	-9	-9	0	-9	1	3	1	0	0	9
654	Quang Tri	1972.2439	44.00	-1.00	1	0	1	-9	0	-9	0	1	2	0	0	9
655	Jerusalem "Jebussi"	1948.3041	10.00	-1.00	1	2	1	-9	0	-9	0	1	1	0	0	9
656	Jerusalem Corridor	1948.5205	5.00	-1.00	1	1	0	-9	0	-9	1	2	1	0	0	9
657	Ardennes	1940.3562	96.00	-1.00	-9	1	1	-9	1	2	0	1	0	3	0	9
658	Cambrai	1940.3644	1.80	-1.00	-9	1	1	-9	1	2	0	1	0	1	0	9
659	Arras	1940.3864	5.00	-1.00	0	1	1	-9	0	-9	0	1	0	0	0	9
660	Boos	1940.4164	0.82	-1.00	1	1	1	-9	1	2	0	2	0	0	0	9

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK ATR CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINSTA STR	DEF TOTAL STR	DEF ATR CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINSTA STR
SEQNO	NAME	STR	CODEA	INTSTA	RRPA	CASA	FINSTA	STRD	CODED	INTSTD	RRPD	CASD	FINSTD
1	NIEUPORT	11500	1	11500	0	4000	7500	11300	1	11300	0	1000	10300
2	WHITE MOUNTAIN	40000	1	40000	0	400	39600	21000	1	21000	0	5000	16000
3	WIMPFEN	20000	1	20000	0	5000	15000	20000	1	20000	0	5800	14200
4	DESSAU BRIDGE	8500	1	8500	0	3000	5500	16000	1	16000	0	1000	15000
5	LUTTER	17000	1	17000	0	2000	15000	20000	1	20000	0	7000	13000
6	BREITENFELD I	32000	1	32000	0	13600	18400	37850	1	37850	0	6100	31750
7	THE LECH	33000	1	33000	0	1000	32000	27000	1	27000	0	3000	24000
8	ALTE VESTE	46000	1	46000	0	4000	42000	60000	1	60000	0	2000	58000
9	LUETZEN	18996	1	18996	0	4000	14996	21770	3	16770	5000	5000	16770
10	NORDLINGEN I	25000	1	25000	0	12000	13000	35000	1	35000	0	2000	33000
11	WITTSTOCK	22000	1	22000	0	7000	15000	30000	1	30000	0	18000	12000
12	BREITENFELD II	25000	1	25000	0	5000	20000	30000	1	30000	0	15000	15000
13	ROCROI	23000	1	23000	0	4000	19000	26000	1	26000	0	14000	12000
14	TUTTLINGEN	22000	1	22000	0	1000	21000	18000	1	18000	0	7000	11000
15	FREIBURG	19000	1	19000	0	8000	11000	16000	1	16000	0	4000	12000
16	JANKAU	15000	1	15000	0	8500	6500	15000	1	15000	0	2000	13000
17	MERGENTHEIM	10000	1	10000	0	700	9300	11000	1	11000	0	3500	7500
18	ALLERHEIM (NORDLINGEN II)	18000	1	18000	0	7500	10500	16000	1	16000	0	6000	10000
19	LENS	14000	1	14000	0	4000	10000	18000	1	18000	0	10000	8000
20	EDGEHILL	14300	1	14300	0	2500	11800	14870	1	14870	0	2500	12370
21	MARSTON MOOR	27000	1	27000	0	1500	25500	17500	1	17500	0	6000	11500
22	TIPPERMUR	6800	1	6800	0	3000	3800	3000	1	3000	0	1	2999
23	KILSYTH	4900	1	4900	0	6	4894	6800	1	6800	0	6000	800
24	NEWBURY II	22000	1	22000	0	500	21500	10000	1	10000	0	500	9500
25	NASEBY	9000	1	9000	0	6000	3000	13000	1	13000	0	1000	12000
26	PRESTON	9000	1	9000	0	300	8700	21000	1	21000	0	5000	16000
27	DUNBAR	11000	1	11000	0	30	10970	22000	1	22000	0	13000	9000
28	WORCESTER	28000	1	28000	0	1000	27000	16000	1	16000	0	9000	7000
29	ST. ANTOINE	12000	1	12000	0	4000	8000	6000	1	6000	0	2000	4000
30	THE DUNES	15000	1	15000	0	2000	13000	12000	1	12000	0	7000	5000
31	THE RAAB	60000	1	60000	0	8000	52000	30000	1	30000	0	2000	28000
32	VIENNA	76000	1	76000	0	2000	74000	107000	1	107000	0	10000	97000
33	CHOCIM II	50000	1	50000	0	1000	49000	80000	1	80000	0	30000	50000
34	SINSHEIM	9500	1	9500	0	1500	8000	7500	1	7500	0	2500	5000
35	SENEF	50000	1	50000	0	10000	40000	70000	1	70000	0	14000	56000
36	ENZHEIM	22000	1	22000	0	3500	18500	31700	1	31700	0	2500	29200
37	TURCKHEIM	33000	1	33000	0	1100	31900	30000	1	30000	0	3400	26600
38	FEHRBELLIN	6000	1	6000	0	500	5500	6400	1	6400	0	2500	3900
39	SEDGE MOOR	4000	1	4000	0	1500	2500	3000	1	3000	0	300	2700
40	KILLTECRANKIE	2800	1	2800	0	600	2200	3400	1	3400	0	1900	1500
41	WALCOURT	24000	1	24000	0	2000	22000	35000	1	35000	0	130	34870
42	FLEURUS	50000	1	50000	0	6000	44000	38000	1	38000	0	19000	19000

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK ATR CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINAL STR	DEF TOTAL STR	DEF ATR CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINAL STR
SEQNO	NAME	STRA	CODEA	INTSTA	RRPA	CASA	FINSTA	STRD	CODED	INTSTD	RRPD	CASD	FINSTD
43	THE BOYNE	35000	1	35000	0	2000	33000	23000	1	23000	0	1500	21500
44	AUGHRIM	18000	1	18000	0	2700	15300	25000	1	25000	0	4400	20600
45	STEENKERKE	63000	1	63000	0	8000	55000	57000	1	57000	0	7000	50000
46	NEERWINDEN (LANDEN)	80000	1	80000	0	9000	71000	50000	1	50000	0	14000	36000
47	MARSAGLIA	40000	1	40000	0	3000	37000	36000	1	36000	0	11000	25000
48	ZENTA	50000	1	50000	0	500	49500	100000	1	100000	0	30000	70000
49	POLTAVA	21500	1	21500	0	9600	11900	80000	1	80000	0	1300	78700
50	BLENHHEIM	52000	1	52000	0	12883	39117	56000	1	56000	0	34190	21810
51	RAHILLIES	62000	1	62000	0	3620	58380	60000	1	60000	0	19000	41000
52	ODENARDE	80000	1	80000	0	4000	76000	85000	1	85000	0	15000	70000
53	MALPLAQUET	110000	1	110000	0	24000	86000	80000	1	80000	0	12000	68000
54	PETERWARDEIN	63000	1	63000	0	4500	58500	60000	1	60000	0	6000	54000
55	MOLLWITZ	18100	1	18100	0	4551	13549	22000	1	22000	0	4850	17150
56	CHOTUSITZ	29000	1	29000	0	6332	22668	24500	1	24500	0	4819	19681
57	DETTINGEN	35000	1	35000	0	2500	32500	26000	1	26000	0	4000	22000
58	FONTENOY	50000	1	50000	0	12000	38000	60000	1	60000	0	6000	54000
59	HOFENFRIEDBERG	50000	1	50000	0	4737	45263	66000	1	66000	0	13176	52824
60	SOOR	22562	1	22562	0	3876	18686	41000	1	41000	0	7444	33556
61	KESSELDORF	31000	1	31000	0	5000	26000	31200	1	31200	0	6630	24570
62	PRESTONPANS	2400	1	2400	0	110	2290	2200	1	2200	0	1800	400
63	CULLODEN	5400	1	5400	0	1558	3842	9000	1	9000	0	309	8691
64	LOBOSITZ	29000	1	29000	0	2906	26094	34500	1	34500	0	2873	31627
65	PRAGUE	65000	1	65000	0	14300	50700	62000	1	62000	0	13400	48600
66	PLASSEY	50050	1	50050	0	500	49550	2975	1	2975	0	63	2912
67	KOLIN	32000	1	32000	0	13768	18232	44000	1	44000	0	9000	35000
68	HASTENBECK	60000	1	60000	0	2500	57500	36000	1	36000	0	1500	34500
69	ROSSBACH	42000	1	42000	0	10150	31850	22000	1	22000	0	548	21452
70	LEUTHEN	33000	1	33000	0	11589	21411	65000	1	65000	0	22000	43000
71	CREFELD	32000	1	32000	0	1800	30200	50000	1	50000	0	8200	41800
72	ZORNDOERF	36000	1	36000	0	12797	23203	43300	1	43300	0	18500	24800
73	HOCHKIRCH	80000	1	80000	0	7587	72413	31000	1	31000	0	9097	21903
74	BERGEN	24000	1	24000	0	2800	21200	30000	1	30000	0	1800	28200
75	MINDEN	45000	1	45000	0	2762	42238	60000	1	60000	0	7086	52914
76	KUNERSDORF	50900	1	50900	0	19100	31800	59500	1	59500	0	15500	44000
77	PLAINS OF ABRAHAM (QUEBEC)	4500	1	4500	0	1500	3000	4800	1	4800	0	650	4150
78	MAXEN	38000	1	38000	0	1000	37000	13500	1	13500	0	1000	12500
79	WARBURG	19000	1	19000	0	1300	17700	17000	1	17000	0	3700	13300
80	LIEGNITZ	30000	1	30000	0	6000	24000	30000	1	30000	0	3600	26400
81	TORGAU	50000	1	50000	0	16670	33330	53400	1	53400	0	15697	37703
82	BUNKER HILL	2650	1	2650	0	1054	1596	3200	1	3200	0	479	2721
83	QUEBEC	1100	1	1100	0	486	614	1800	1	1800	0	18	1782
84	WHITE PLAINS	13000	1	13000	0	313	12687	13000	1	13000	0	150	12850

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINAL STR	DEF TOTAL STR	DEF CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINAL STR
SEQNO	NAME	STRA	CODEA	INTSTA	REPA	CASA	FINSTA	STRD	CODED	INTSTD	REPRD	CASD	FINSTD
85	TRENTON	2420	1	2420	0	12	2408	1520	1	1520	0	996	524
86	PRINCETON	4800	3	1250	3550	44	4756	1200	3	800	400	215	985
87	FREEMAN'S FARM	4400	3	3300	1100	556	3844	7000	1	7000	0	316	6684
88	GERMANTOWN	11200	1	11200	0	1090	10110	9000	1	9000	0	551	8449
89	BENT'S HEIGHTS	5000	1	5000	0	600	4400	11000	1	11000	0	130	10870
90	MONMOUTH COURT HOUSE	13000	3	2000	11000	358	12642	11000	3	5000	6000	362	10638
91	CAMDEN	2100	1	2100	0	324	1776	3050	1	3050	0	1050	2000
92	COMPENS	1100	1	1100	0	929	171	1025	1	1025	0	72	953
93	GUILFORD COURT HOUSE	1900	1	1900	0	532	1368	4449	1	4449	0	420	4029
94	HOBKIRK'S HILL	900	1	900	0	258	642	1551	1	1551	0	420	1131
95	EUTAW SPRINGS	2200	1	2200	0	554	1646	2000	1	2000	0	693	1307
96	VALMY	34000	1	34000	0	350	33650	36000	1	36000	0	400	35600
97	JEMAPPES	40000	1	40000	0	3000	37000	13000	1	13000	0	2500	10500
98	NEERWINDEN	45000	1	45000	0	4000	41000	43000	1	43000	0	3000	40000
99	HONDSCHOOTE	42000	1	42000	0	3000	39000	13000	1	13000	0	3000	10000
100	MATTIGNIES	44000	1	44000	0	4500	39500	23000	1	23000	0	3000	20000
101	FLEURUS	46000	1	46000	0	4000	42000	73000	1	73000	0	7000	66000
102	LODI	17000	3	6100	10900	900	16100	10000	1	10000	0	1850	8150
103	CASTIGLIONE	30000	3	21000	9000	1500	28500	25000	1	25000	0	3000	22000
104	NERESHEIM	40000	1	40000	0	3000	37000	45000	1	45000	0	3000	42000
105	WARZBURG	44000	3	-1	-1	1500	42500	30000	1	30000	0	3000	27000
106	ARCOLA	17300	1	17300	0	4500	12800	12700	1	12700	0	7000	5700
107	RIVOLI	28000	1	28000	0	14000	14000	20500	3	-1	-1	5000	15500
108	PYRAMIDS	25000	1	25000	0	300	24700	21000	1	21000	0	5000	16000
109	STOCKACH I	38000	1	38000	0	4500	33500	50000	1	50000	0	6000	44000
110	MOUNT TABOR	35000	1	35000	0	6500	28500	4500	3	2000	2500	60	4440
111	ZURICH I	40000	1	40000	0	3400	36600	25000	1	25000	0	1600	23400
112	NOVI	50000	1	50000	0	9000	41000	35000	1	35000	0	11000	24000
113	ZURICH III	35000	1	35000	0	4000	31000	23000	1	23000	0	8000	15000
114	MOSKIRCH	60000	1	60000	0	4000	56000	60000	1	60000	0	5000	55000
115	MARENGO	31000	1	31000	0	11000	20000	29000	3	9000	20000	7000	22000
116	HOHENLINDEN	57000	1	57000	0	20000	37000	55000	3	33000	22000	2500	52500
117	AUSTERLITZ	85400	1	85400	0	27500	57900	73200	3	65200	8000	7000	66200
118	JENA	96000	3	46000	50000	4000	92000	53000	3	38000	15000	30000	23000
119	AUERSTADT	63500	3	47900	15600	20000	43500	27000	3	20800	6200	4000	23000
120	EYLAU	78000	3	48900	29100	18500	59500	80000	3	71000	9000	28000	52000
121	FRIEDLAND	80000	3	17000	63000	8000	72000	60000	1	60000	0	25000	35000
122	VIMTERO	13050	1	13050	0	1800	11250	19600	1	19600	0	750	18850
123	CORUNNA	20600	1	20600	0	1600	19000	14800	1	14800	0	1000	13800
124	ECKMUEHL	74000	1	74000	0	12000	62000	66000	3	36000	30000	6000	60000
125	ASPERN-ESSLING	99000	1	99000	0	23000	76000	66000	3	23000	43000	21000	45000
126	THE RAAH	35000	1	35000	0	4000	31000	37000	1	37000	0	6211	30789

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BATTLE SEQ. NO.	BATTLE NAME	ATK STR	ATK CODE	ATK INITIAL	ATK STR	ATK CAS	ATK REIN/ REPL	ATK RERPA	CASA	FINSTA	DEF STR	DEF INITIAL	DEF STR	DEF REIN/ REPL	CASD	DEF STR	FINSTD
SEQNO	NAME	STR	CODEA	INTSTA	STR	CASA	RERPA				STRD	CODED	INTSTD	RERPD			
127	WAGRAM	140000	3	-1	46000	34000	-1	106000	106000	140000	3	-1	54500	-1	45000	95000	
128	TALAVERA	46000	1	46000	0	7300	0	38700	38700	54500	1	51910	0	6700	47800		
129	BUSSACO	65900	1	65900	0	4500	0	61400	61400	51910	1	37360	0	1300	50610		
130	FUENTES DE ONORO	48260	1	48260	0	2700	0	45560	45560	37360	1	30000	0	7500	35560		
131	ALBUERA	23000	1	23000	0	8000	0	15000	15000	30000	1	42000	0	13000	22500		
132	SALAMANCA	46000	1	46000	0	6000	0	40000	40000	42000	1	68024	0	7000	29000		
133	VITTORIA	79062	1	79062	0	5148	0	73914	73914	68024	1	120000	0	40000	61024		
134	BORODINO	120000	1	120000	0	28000	0	92000	92000	120000	1	45000	75000	22000	80000		
135	LUETZEN	93000	1	93000	0	18000	0	75000	75000	120000	3	97000	0	20000	98000		
136	BAUTZEN	199000	3	115000	84000	25000	12000	174000	174000	97000	1	70000	50000	10000	77000		
137	DRESDEN	170000	3	158000	12000	40000	2E+05	130000	130000	120000	3	177500	18700	60000	110000		
138	LEIPZIG	365000	3	200000	300000	5000	5000	300000	300000	196200	3	40000	0	15000	136200		
139	HANAU	60000	3	30000	32000	6000	6000	104000	104000	40000	1	40000	0	6000	25000		
140	LA ROTHIERE	110000	3	78000	30000	6000	6000	41600	41600	85000	1	85000	0	4000	34000		
141	LAON	47600	3	37600	10000	6000	6000	77000	77000	30000	3	82895	12000	5000	81000		
142	ARCIS-SUR-AUBE	80000	3	20000	60000	3000	12000	55567	55567	82895	1	8000	25765	4500	29265		
143	ILIGNY	67567	3	49567	18000	4500	0	22241	22241	33765	3	68000	69547	22500	115047		
144	QUATRE BRAS	26741	1	26741	0	25000	0	43265	43265	137547	3	1800	0	668	1132		
145	WATERLOO	68265	1	68265	0	29	0	3471	3471	1800	1	2650	0	335	2315		
146	THE THAMES	3500	1	3500	0	604	0	1496	1496	2650	1	1700	1300	878	2122		
147	CHIPPEN	2100	1	2100	0	860	0	1140	1140	3000	3	3200	0	71	3129		
148	LUNDY'S LANE	2000	3	700	1300	2600	0	3400	3400	3200	1	3000	0	1800	1200		
149	NEW ORLEANS	6000	1	6000	0	66	0	2934	2934	3000	1	5180	0	2908	2272		
150	BOYACA	3000	1	3000	0	200	0	6200	6200	5180	1	2200	0	250	1950		
151	CARABOBO	6400	1	6400	0	531	0	1269	1269	2400	1	2400	0	340	2060		
152	BOMBONA	1800	1	1800	0	590	0	1910	1910	2000	1	2000	0	464	1536		
153	PICHINCHA	2500	1	2500	0	145	0	1855	1855	2000	1	5780	0	919	4861		
154	JUNIN	2000	1	2000	0	2500	0	6810	6810	5780	1	1600	0	1600	0		
155	AYACUCHO	9310	1	9310	0	39	0	704	704	1600	1	6000	0	400	5600		
156	SAN JACINTO	743	1	743	0	48	0	2240	2240	6000	1	5600	0	600	5000		
157	PALO ALTO	2288	1	2288	0	122	0	1578	1578	5600	1	4759	0	746	4013		
158	RESACA DE LA PALMA	1700	1	1700	0	2000	0	12000	12000	4759	1	12000	0	4000	8000		
159	BUENA VISTA	14000	1	14000	0	431	0	8069	8069	12000	1	4000	0	1513	2487		
160	CERRO GORDO	8500	1	8500	0	60	0	4440	4440	4000	1	10500	0	3124	7376		
161	CONTRERAS	4500	1	4500	0	996	0	7501	7501	10500	1	12000	0	2700	9300		
162	CHURUBUSCO	8497	1	8497	0	792	0	2308	2308	12000	1	15000	0	1800	13200		
163	MOLINO DEL REY	3100	1	3100	0	863	0	6317	6317	15000	1	36400	0	5709	30691		
164	CHAPULTEPEC	7180	1	7180	0	2562	0	62438	62438	36400	1	8500	7500	4105	11895		
165	THE ALMA	65000	1	65000	0	15187	0	26813	26813	16000	3	61618	0	10236	51382		
166	INKERMAN	42000	1	42000	0	4530	0	43560	43560	61618	1	130000	0	21800	108200		
167	MAGENTA	48090	1	48090	0	17400	0	125600	125600	130000	1						
168	SOLFERINO	143000	1	143000	0		0				1						

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK ATR CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINSTA STR	DEF TOTAL STR	DEF ATR CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINSTD STR
SEQNO	NAME	STRA	CODEA	INTSTA	REPA	CASA	FINSTA	STRD	CODED	INTSTD	REPRD	CASD	FINSTD
169	SADOMA	22000	3	105000	1E+05	9200	210800	215000	1	215000	0	44300	170700
170	CUSTOZZA II	90000	3	-1	-1	8100	81900	75000	1	75000	0	5600	69400
171	FIRST BULL RUN (MANASSAS)	35000	1	35000	0	2896	32104	32500	3	30500	2000	1982	30518
172	WILSON'S CREEK	5400	1	5400	0	1235	4165	10175	1	10175	0	1095	9080
173	BELMONT	3144	1	3144	0	607	2537	5000	3	2500	2500	642	4358
174	MILL SPRINGS	4000	1	4000	0	533	3467	4000	1	4000	0	262	3738
175	FORT DONELSON	21000	1	21000	0	2000	19000	27000	1	27000	0	2609	24391
176	PEA RIDGE	16202	1	16202	0	1300	14902	10500	1	10500	0	1384	9116
177	KERNSTOWN	3087	1	3087	0	718	2369	7000	1	7000	0	590	6410
178	SHILON	40355	1	40355	0	10699	29656	66812	3	41330	25482	13047	53765
179	FRONT ROYAL	16000	1	16000	0	35	15965	1063	1	1063	0	904	159
180	FIRST WINCHESTER	16000	1	16000	0	365	15635	7000	1	7000	0	2126	4874
181	CROSS KEYS	10500	1	10500	0	684	9816	5000	1	5000	0	288	4712
182	PORT REPUBLIC	15000	3	1200	13800	800	14200	3000	1	3000	0	1018	1982
183	SEVEN PINES (FAIR OAKS)	41816	3	7580	34236	6100	35716	41797	3	8253	33544	5000	36797
184	MECHANICSVILLE	16808	1	16808	0	1484	15324	15631	1	15631	0	361	15270
185	GAINES'S MILL	57018	3	21752	35266	8751	48267	34214	3	25214	9000	6837	27377
186	GLENDALF-FRAYSER'S FARM	86748	3	11000	75748	4241	82507	83345	3	24635	58710	4443	78902
187	MALVERN HILL	82507	1	82507	0	5355	77152	78902	1	78902	0	3214	75688
188	CEDAR MOUNTAIN	8030	1	8030	0	2353	5677	16848	1	16848	0	1338	15510
189	SECOND BULL RUN (MANASSAS)	75696	3	35083	40613	14462	61234	48527	3	20000	28527	9474	39053
190	SOUTH MOUNTAIN	28480	1	28480	0	1813	26667	17852	1	17852	0	2685	15167
191	ANTIETAM	90000	1	90000	0	12410	77590	46000	3	43000	3000	13700	32300
192	CORINTH	22000	1	22000	0	4233	17767	21147	1	21147	0	2520	18627
193	PERRYVILLE	36940	1	36940	0	4211	32729	16000	1	16000	0	3396	12604
194	FREDERICKSBURG	106007	1	106007	0	12653	93354	72497	1	72497	0	4656	67841
195	MURFREESBORO	34732	1	34732	0	11739	22993	41400	1	41400	0	12906	28494
196	CHANCELLORSVILLE	113000	3	109480	3520	17278	95722	60892	1	60892	0	12821	48071
197	CHAMPION'S HILL	29373	1	29373	0	2441	26932	20000	1	20000	0	3851	16149
198	BRANDY STATION	12000	3	10500	1500	900	11100	10000	1	10000	0	500	9500
199	GETTYSBURG	75054	3	28800	46254	28063	46991	83289	3	23600	59689	23049	60240
200	CHICKAMAUGA	66326	1	66326	0	18454	47872	58222	1	58222	0	16170	42052
201	CHATTANOOGA	61000	1	61000	0	5824	55176	40000	1	40000	0	6667	33333
202	THE WILDERNESS	101895	3	74000	27895	17666	84229	61025	3	31000	30025	7750	53275
203	SPOTSYLVANIA	90000	3	20000	70000	18399	71601	50000	3	14000	36000	10000	40000
204	NEW MARKET	5000	1	5000	0	577	4423	5150	1	5150	0	831	4319
205	COLD HARBOR	107907	1	107907	0	11000	96707	59000	1	59000	0	1500	57500
206	KENESAW MOUNTAIN	16225	1	16225	0	2051	14174	17733	1	17733	0	442	17291
207	PEACHTREE CREEK	18832	1	18832	0	2746	16086	20139	1	20139	0	1600	18539
208	ATLANTA	36934	1	36934	0	8000	28934	30477	1	30477	0	3722	26755
209	PETERSBURG	63797	3	16100	47697	8150	55647	41499	3	5400	36099	4752	36747
210	GLOBE TAVERN	20289	3	11832	8457	4455	15834	14787	3	-1	-1	1619	13168

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINAL STR	DEF TOTAL STR	DEF CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINAL STR
SEQNO	NAME	STRA	CODEA	INTSTA	REPA	CASA	FINSTA	STRD	CODED	INTSTD	RERPD	CASD	FINSTD
211	OPEQUON CREEK	37711	1	37711	0	5018	32693	17103	1	17103	0	3921	13182
212	CEDAR CREEK	18410	1	18410	0	2910	15500	30829	1	30829	0	5665	25164
213	FRANKLIN	26897	1	26897	0	6252	20645	27939	1	27939	0	2326	25613
214	NASHVILLE	49773	1	49773	0	3061	46712	23207	1	23207	0	5350	17857
215	BENTONVILLE	27000	1	27000	0	2606	24394	60000	3	17990	42010	1646	58354
216	DINNIDDEE COURTHOUSE	45247	3	13000	32247	2781	42466	20030	3	3500	16530	1800	18230
217	FIVE FORKS	30000	1	30000	0	634	29366	10000	1	10000	0	6000	4000
218	SELMA	13500	1	13500	0	400	13100	7000	1	7000	0	4000	3000
219	SAYLOR'S CREEK	30000	1	30000	0	1180	28820	21000	1	21000	0	7000	14000
220	WEISSENBURG	51000	1	51000	0	1600	49400	6000	1	6000	0	2100	3900
221	FROESCHWILLER	82000	1	82000	0	10700	71300	41000	1	41000	0	20300	20700
222	SPICHERN	42000	3	16000	26000	4900	37100	28000	3	13400	14600	3100	24900
223	MARS LA TOUR	91000	3	29000	34000	16000	47000	113000	1	113000	0	14000	99000
224	GRAVELOTTE-ST. PRIVAT	187000	1	187000	0	20200	166800	113000	1	113000	0	12800	100200
225	SEDAN	200000	1	200000	0	9000	191000	120000	1	120000	0	38000	82000
226	COULMIERS	60000	1	60000	0	1800	58200	20000	1	20000	0	1800	18200
227	ORLEANS	86000	1	86000	0	6300	79700	116000	1	116000	0	28000	88000
228	LE MANS	72000	1	72000	0	4000	68000	88000	1	88000	0	26000	62000
229	BELFORT	110000	1	110000	0	8000	102000	40000	1	40000	0	2000	38000
230	ISANDHLWANA	20000	1	20000	0	3000	17000	1800	1	1800	0	1445	355
231	ULUNDI	20000	1	20000	0	1500	18500	5317	1	5317	0	100	5217
232	MAJUBA HILL	1200	1	1200	0	6	1194	350	1	350	0	284	66
233	TEL EL-KEBIR	17401	1	17401	0	469	16932	20000	1	20000	0	2500	17500
234	ONDURMAN	55000	1	55000	0	30700	24300	25800	1	25800	0	482	25318
235	ADOWA	120000	1	120000	0	17000	103000	20251	1	20251	0	9678	10573
236	MODDER RIVER	8000	1	8000	0	468	7532	3500	1	3500	0	150	3350
237	MAGERSFONTEIN	15000	1	15000	0	948	14052	9000	1	9000	0	236	8764
238	COLENSO	13411	1	13411	0	1126	12285	5500	1	5500	0	50	5450
239	SPION KOP	24000	1	24000	0	1734	22266	5000	1	5000	0	335	4665
240	PAARDEBURG	15000	1	15000	0	1270	13730	4000	1	4000	0	350	3650
241	SAN JUAN HILL	15065	1	15065	0	1572	13493	1592	1	1592	0	850	742
242	THE YALU	56000	1	56000	0	1110	54900	18000	1	18000	0	2500	15500
243	TELISSU	36000	1	36000	0	1200	34800	38000	3	-1	-1	3800	34200
244	LIAOYANG	135000	3	-1	-1	17500	117500	150000	3	-1	-1	16500	133500
245	THE SHA-HO	210000	3	-1	-1	46000	164000	145000	3	-1	-1	17000	128000
246	SANDEPU	58000	1	58000	0	13000	45000	40000	1	40000	0	9400	30600
247	MUKDEN	314000	3	-1	-1	41000	273000	310000	3	-1	-1	96500	213500
248	KUMANOVO	103000	3	61800	41200	5000	98000	110000	1	110000	0	10000	100000
249	LULE BURGAS	140000	3	65000	75000	20000	120000	110000	1	110000	0	30000	80000
250	PRELIP	50000	3	25000	25000	3000	47000	20000	1	20000	0	6000	14000
251	MONASTIR	120000	1	120000	0	5000	115000	90000	1	90000	0	20000	70000
252	ADRIANOPLE	152000	1	152000	0	9300	142700	75000	1	75000	0	15000	60000

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK STR	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINSTA STR	DEF TOTAL STR	DEF STR	DEF CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINAL STR
SEQNO	NAME	STR	CODEA	INTSTA	RRPA	CASA	FINSTA	STRD	CODED	INTSTD	RRPD	CASD	FINSTD	
253	WARSAW	160000	3	-1	-1	50000	110000	200000	3	-1	-1	150000	50000	
254	THE NIEMAN	80000	3	-1	-1	20000	60000	108500	3	-1	-1	50000	58500	
255	GUADALAJARA-BRTHUEGA	52000	1	52000	0	6460	45540	100000	1	100000	0	6660	93340	
256	CHANGKUFENG-SHACHAOFENG	1410	3	-1	-1	178	1232	1460	3	-1	-1	350	1110	
257	HILL 52-SHACHAOFENG	4000	3	-1	-1	400	3600	3010	3	-1	-1	41	2969	
258	CHANGKUFENG-HILL 52	20000	3	-1	-1	4000	16000	8000	3	-1	-1	1100	6900	
259	MONKHAN-OPENING ENGAGEMENT	1300	3	-1	-1	278	1022	1228	3	-1	-1	250	978	
260	MONKHAN-SOVIET COUNTEROFFENSIVE	57000	1	57000	0	10000	47000	30000	1	30000	0	11500	18500	
261	SUOISSALMI	9000	3	4000	5000	2670	6330	29954	3	11954	18000	19600	10354	
262	ALSACE-LORRAINE I	457000	3	-1	-1	65340	391660	345000	3	-1	-1	32880	312120	
263	ALSACE-LORRAINE II	350000	3	-1	-1	11000	339000	400000	3	-1	-1	21780	378220	
264	THE ARDENNES	360000	3	-1	-1	17196	342804	400000	3	-1	-1	12720	387280	
265	THE Sambre	440000	3	-1	-1	21018	418982	254000	3	-1	-1	8000	246000	
266	MONS	260000	3	-1	-1	6210	253790	70000	3	-1	-1	1638	68362	
267	LE CATEAU	250000	3	-1	-1	8970	241030	40000	3	-1	-1	7800	32200	
268	GUISE	260000	3	-1	-1	12000	248000	200000	3	-1	-1	8000	192000	
269	HEIGHTS OF NANCY	350000	3	-1	-1	75000	275000	276000	3	-1	-1	52000	224000	
270	OURCQ I	100000	1	100000	0	5600	94400	45000	1	45000	0	2500	42500	
271	OURCQ II	198000	3	-1	-1	40000	158000	157000	3	-1	-1	39000	118000	
272	PETIT MORIN	227000	3	-1	-1	45000	182000	82000	3	-1	-1	19000	63000	
273	TWO MORINS	90000	3	-1	-1	2500	87500	13000	3	-1	-1	3500	9500	
274	MARSHES OF ST.GOND	101000	3	-1	-1	25000	76000	141000	3	-1	-1	29000	112000	
275	VITRY LE FRANCOIS	113000	3	-1	-1	26000	87000	170000	3	-1	-1	27000	143000	
276	GAP OF REVIGNY	142000	3	-1	-1	29000	113000	180000	3	-1	-1	29000	151000	
277	THE AISNE	343000	3	-1	-1	50000	293000	290000	3	-1	-1	30000	260000	
278	STALLUPONEN	50000	1	50000	0	3500	46500	40000	3	-1	-1	2000	38000	
279	GUMBINNEN	120000	1	120000	0	20000	100000	150000	1	150000	0	20000	130000	
280	TANNENBERG	187000	3	-1	-1	13212	173788	160000	3	-1	-1	120000	40000	
281	MASURIAN LAKES	288600	1	288600	0	40000	248600	273000	1	273000	0	125000	148000	
282	KRASNIK	350000	3	-1	-1	50000	300000	260000	3	-1	-1	50000	210000	
283	KOMAROV	300000	3	-1	-1	40000	260000	260000	3	-1	-1	90000	170000	
284	GNILA LIPA	240000	3	-1	-1	76000	164000	480000	3	-1	-1	35000	445000	
285	RAVA RUSSKA	900000	3	-1	-1	180000	720000	936000	3	-1	-1	82000	854000	
286	LOOZ	260000	3	-1	-1	60000	200000	400000	3	-1	-1	95000	305000	
287	THE JADAR	200000	3	-1	-1	34000	166000	200000	3	-1	-1	18000	182000	
288	THE KOLUBRA	200000	3	-1	-1	45000	155000	300000	3	-1	-1	92000	208000	
289	EASTERN CHAMPAGNE	163182	1	163182	-1	42820	-1	85220	1	85220	-1	23050	-1	
290	NEUVE CHAPELLE	87000	3	-1	-1	12892	74108	40000	3	20000	20000	12000	28000	
291	YPRES II	150000	3	-1	-1	35000	115000	190000	3	-1	-1	70000	120000	
292	FESTUBERT	90365	3	-1	-1	16648	73717	30000	3	-1	-1	5000	25000	
293	LOOS	298437	3	-1	-1	61713	236724	75000	3	-1	-1	19836	55164	
294	WINTER BATTLE	650000	3	-1	-1	135000	515000	300000	3	-1	-1	210000	90000	

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BATTLE SEQ. NO.	BATTLE NAME	ATK STR	ATK CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINSTA STR	DEF TOTAL STR	DEF CODE	DEF INITIAL STR	DEF REIN/ REPL	CASD	DEF FINAL STR
SEONO	NAME	STRA	CODEA	INTSTA	REPA	CASA	FINSTA	STRD	CODED	INTSTD	RRPD	CASD	FINSTD
295	GOLICE-TARNOW (OPENING PHASE)	216000	1	216000	0	36000	180000	219000	1	219000	0	153654	65346
296	FIRST ISONZO	200000	3	-1	-1	14947	185053	100000	3	-1	-1	9958	90042
297	SECOND ISONZO	200000	3	-1	-1	41866	158134	128500	3	-1	-1	46640	81860
298	THIRD ISONZO	356000	3	-1	-1	67008	288992	157000	3	-1	-1	31474	125526
299	FOURTH ISONZO	311000	3	-1	-1	48967	262033	136000	3	-1	-1	40217	95783
300	FIRST DARDANELLES LANDING	32000	3	-1	-1	5400	26600	10000	3	-1	-1	3900	6100
301	SUVLA BAY	25000	1	25000	0	9000	16000	15800	3	1800	14000	750	15050
302	KUT-EL-AMARA	11000	1	11000	0	1230	9770	11300	1	11300	0	5300	6000
303	CTESIPHON	13756	1	13756	0	4593	9163	20400	3	-1	-1	6188	14212
304	FIRST SOMME	600000	1	600000	-1	670000	-1	300000	1	300000	-1	500000	-1
305	SOMME-FOURTH ARMY ATTACK	290000	1	290000	0	57450	232550	95000	1	95000	0	8000	87000
306	SOMME-OVILLERS	11300	1	11300	0	5121	6179	2800	1	2800	0	281	2519
307	SOMME-BAZENTIN RIDGE	45000	1	45000	0	9000	36000	15000	1	15000	0	4000	-1
308	SOMME-FLERS-COURCELETTE	190000	1	190000	0	3500	186500	90000	1	90000	0	3000	87000
309	CAUCASUS WINTER OFFENSIVE	103000	3	-1	-1	8000	95000	61000	3	-1	-1	25000	36000
310	LAKE NAROTCH	350000	3	-1	-1	100000	250000	180000	3	-1	-1	20000	160000
311	1916 BRUSILOV OFFENSIVE	600000	1	600000	-1	495000	-1	500000	1	500000	-1	260000	-1
312	FIFTH ISONZO	300000	3	-1	-1	3800	296200	160000	3	-1	-1	1985	158015
313	ASIAGO	213000	1	213000	-1	41264	-1	118000	1	118000	-1	74887	-1
314	TRENTINO COUNTER-OFFENSIVE	200000	1	200000	-1	72000	-1	172000	1	172000	-1	29000	-1
315	SIXTH ISONZO (GORITZIA)	308000	1	308000	-1	51232	-1	168000	1	168000	-1	41835	-1
316	ARRAS	276000	1	276000	-1	83379	-1	120000	1	120000	-1	75000	-1
317	ALSNE II	1000000	3	-1	-1	118000	882000	480000	3	-1	-1	40000	440000
318	MESINES	180000	1	180000	-1	17000	-1	100000	1	100000	-1	32500	-1
319	YPRES III	380000	1	380000	-1	399821	-1	200000	1	200000	-1	270710	-1
320	CAMBRAI I	90000	1	90000	-1	15000	-1	75000	1	75000	-1	25000	-1
321	CAMBRAI II	130000	1	130000	-1	28000	-1	90000	1	90000	-1	29000	-1
322	TENTH ISONZO	280000	1	280000	-1	157000	-1	165000	1	165000	-1	75700	-1
323	ELEVENTH ISONZO	518000	1	518000	-1	166000	-1	252000	1	252000	-1	85000	-1
324	CAPORETTO	602000	3	-1	-1	20000	582000	574000	3	-1	-1	305000	269000
325	TIGRIS CROSSING	46000	3	-1	-1	2750	43250	10500	3	-1	-1	4300	6200
326	GAZA I	25000	1	25000	0	4000	21000	26000	1	26000	0	2450	23550
327	GAZA II	25000	1	25000	0	6400	18600	20000	1	20000	0	2000	18000
328	GAZA III	72000	3	-1	-1	2696	69304	34000	3	-1	-1	2950	31450
329	JUNCTION STATION	85000	1	85000	0	4000	81000	15500	1	15500	0	4800	10700
330	SECOND SOMME-PHASE I (SOMME-PERONNE)	800000	1	800000	-1	70000	-1	400000	1	400000	-1	120000	-1
331	SECOND SOMME-PHASE II (SOMME-MONTDIDIER)	700000	1	700000	-1	133000	-1	600000	1	600000	-1	140000	-1
332	LYS	500000	3	-1	-1	175000	325000	400000	3	-1	-1	152500	247500
333	YVONNE & OLETTE POSITIONS (SECTOR TOULON)	3072	1	3072	0	71	3001	650	1	650	0	72	578
334	CHEMIN-DES-DANES	250000	1	250000	-1	118000	-1	75000	1	75000	-1	128000	-1
335	CANTIGNY	8679	1	8679	0	300	8379	725	1	725	0	386	339
336	BELLEAU WOOD	9437	1	9437	0	1087	8350	6436	1	6436	0	730	5706

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK ATR CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINAL STR	DEF TOTAL STR	DEF ATR CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINAL STR
SEONO	NAME	STRA	CODEA	INTSTA	REPA	CASA	FINSTA	STRD	CODED	INTSTD	RRPD	CASD	FINSTD
337	HILL 142	2913	3	-1	-1	383	2530	2458	3	-1	-1	471	1987
338	WEST WOOD I	1740	1	1748	0	361	1379	1121	1	1121	0	54	1067
339	BOURESCHES I	2733	1	2733	0	343	2390	1352	1	1352	0	186	1166
340	HILL 192	3608	1	3608	0	340	3268	3955	1	3955	0	87	3868
341	WEST WOOD II	3343	1	3343	0	279	3064	1798	1	1798	0	541	1257
342	NORTH WOOD I (HUNTING LODGE)	1747	1	1747	0	167	1580	1952	1	1952	0	293	1659
343	BOURESCHES II	3690	1	3690	0	138	3552	2629	1	2629	0	107	2522
344	NORTH WOOD II	1697	1	1697	0	192	1505	1428	1	1428	0	18	1410
345	NORTH WOOD III	1256	1	1256	0	133	1123	1565	1	1565	0	19	1546
346	NORTH WOOD IV	4453	3	-1	-1	273	4180	1546	3	-1	-1	437	1109
347	VAUX	12812	1	12812	0	336	12476	10358	3	-1	-1	1074	9284
348	LA ROCHE WOOD EAST	4515	1	4515	0	94	4421	5182	1	5182	0	568	4614
349	LA ROCHE WOOD WEST	4508	1	4508	0	223	4285	5177	1	5177	0	506	4671
350	MOYON-MONTDIDIER	275000	3	-1	-1	80000	195000	300000	3	-1	-1	35466	264534
351	CHAMPAGNE-MARNE	400000	3	-1	-1	100000	300000	450000	3	-1	-1	40000	410000
352	AISNE-MARNE I	750000	1	750000	-1	55000	-1	450000	3	-1	-1	50000	400000
353	MISSY AUX BOIS RAVINE	5004	1	5004	0	393	4611	3013	1	3013	0	1853	1160
354	BREUIL	5039	1	5039	0	448	4591	2663	1	2663	0	1243	1420
355	ST. AMAND FARM	1150	1	1150	0	120	1030	400	1	400	0	400	0
356	BEAUREPAIRE FARM	4480	1	4480	0	125	4355	565	1	565	0	181	384
357	CRAVANCON FERME-CHAUDUN	10345	1	10345	0	895	9450	2420	1	2420	0	1610	810
358	CHAUDUN	1611	1	1611	0	130	1481	800	1	800	0	500	300
359	AISNE-MARNE II	725000	3	-1	-1	195000	530000	400000	3	-1	-1	170000	230000
360	BERZY LE SEC	4000	1	4000	0	210	3790	350	1	350	0	116	234
361	BUZANCY RIDGE	5300	1	5300	0	350	4950	554	1	554	0	276	278
362	PICARDY 1918, I	225000	1	-1	-1	10000	-1	170000	1	-1	-1	30000	-1
363	PICARDY 1918, II	300000	1	-1	-1	35000	-1	200000	1	-1	-1	80000	-1
364	ST. MIHIEL	400000	3	-1	-1	7000	393000	100000	3	-1	-1	20000	80000
365	LAHAYVILLE-BOIS DE LAMARCHE	13208	1	13208	0	185	13023	2090	1	2090	0	1076	1014
366	MEUSE-ARGONNE I	300000	1	300000	-1	22128	-1	190000	1	190000	-1	21448	-1
367	BLANC-MONT I	26000	3	-1	-1	4700	21300	13000	3	-1	-1	4000	9000
368	MEDEAH FARM	1921	1	1921	0	247	1674	155	1	155	0	83	72
369	ESSEN HOOK	1420	1	1420	0	140	1280	216	1	216	0	120	96
370	BLANC MONT RIDGE	1400	1	1400	0	308	1092	458	1	458	0	241	217
371	SOMMEPY WOOD	9230	1	9230	0	620	9081	670	1	670	0	450	217
372	BLANC MONT II	18000	1	18000	0	1589	16411	10000	1	10000	0	500	9500
373	MEUSE-ARGONNE II	500000	1	500000	-1	77448	-1	300000	1	300000	-1	75068	-1
374	EXERMONT-MONTREFAIGNE	5336	1	5336	0	352	4984	3245	1	3245	0	192	3053
375	MAYACHE RAVINE	5427	1	5427	0	376	5051	1899	1	1899	0	114	1785
376	LA NEUVILLE LE COMTE FERME	5365	1	5365	0	340	5025	1940	1	1940	0	61	1879
377	FERME DES GRANGES-FLEVILLE	5461	1	5461	0	242	5219	2587	3	-1	-1	250	2337
378	HILL 212	5022	1	5022	0	301	4721	3335	1	3335	0	173	3162

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK ATR CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINAL STR	DEF TOTAL STR	DEF ATR CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINAL STR
SEQNO	NAME	STRA	CODEA	INTSTA	REPA	CASA	FINSTA	STRD	CODED	INTSTD	RERPD	CASD	FINSTD
379	BOIS DE BOYON-MONTREFAGNE	4778	1	4778	0	132	4646	2925	1	2925	0	126	2799
380	HILL 272	2950	1	2950	0	109	2841	2563	1	2563	0	250	2313
381	MEUSE-ARGONNE III	600000	1	600000	-1	30426	-1	380140	1	380140	-1	29491	-1
382	REMILLY-AILLICOURT	1210	1	1210	0	25	1185	296	1	296	0	30	266
383	HILL 252-PONT MAUGIS	1989	1	1989	0	110	1879	1655	1	1655	0	182	1473
384	THE PIAVE	840000	3	-1	-1	150000	690000	784000	3	-1	-1	69079	714921
385	NEGIDDO	51170	1	51170	0	3378	47792	18250	1	18250	0	7000	11250
386	ALAM HALFA	124000	1	124000	0	2940	121060	120000	1	120000	0	1750	118250
387	EL ALAMEIN II	220476	1	220476	0	13560	206916	105223	1	105223	0	15995	89228
388	OPERATION LIGHTFOOT	220476	1	220476	0	6140	214336	105223	1	105223	0	3695	101528
389	ALAMEIN BRIDGEHEAD EXPANSION	214336	1	214336	0	3000	211336	101528	1	101528	0	4500	97028
390	OPERATION SUPERCHARGE	211000	1	211000	0	4420	206580	97000	1	97000	0	7800	89200
391	CHOUJUT PASS	465	1	465	0	27	438	188	1	188	0	21	167
392	EL GUETTAR	10300	1	10300	0	450	9850	22019	1	22019	0	203	21816
393	SEDJANNE-BIZERTE	24098	1	24098	-1	1120	-1	5000	1	5000	-1	605	-1
394	AMPHITHEATER	12917	1	12917	0	1154	11763	4250	1	4250	0	100	4150
395	PORT OF SALERNO	12917	1	12917	0	1530	11387	4250	1	4250	-1	120	-1
396	SELE-CALORE CORRIDOR	12447	1	12447	0	251	12196	8390	1	8390	0	60	8330
397	BATTIPAGLIA I	14730	1	14730	-1	1112	-1	11230	1	11230	0	1639	9591
398	VIETRI	15000	1	15000	-1	900	-1	12917	1	12917	514	1164	12267
399	TOBACCO FACTORY	14733	1	14733	-1	702	-1	12691	1	12691	0	317	12374
400	BATTIPAGLIA II	14730	1	14730	0	300	14430	6995	1	6995	-1	110	-1
401	EBOLI	15576	1	15576	-1	386	-1	6702	1	6702	-1	120	-1
402	VIETRI II	13300	1	13300	-1	400	-1	18912	1	18912	337	255	18994
403	GRAZZANISE	14557	1	14557	-1	370	-1	8068	1	8068	-1	80	-1
404	CAIAZZO	18210	1	18210	-1	140	-1	6435	1	6435	-1	52	-1
405	CAPUA	16857	1	16857	0	420	16437	8000	1	8000	0	94	7906
406	CASTEL VOLTURNO	17765	1	17765	-1	500	-1	8158	1	8158	-1	40	-1
407	MONTI ACERO	21265	1	21265	-1	133	-1	6435	1	6435	-1	130	-1
408	TRIFLISCO	18476	1	18476	-1	267	-1	7250	1	7250	-1	76	-1
409	DRAGONI	17034	1	17034	-1	65	-1	5152	1	5152	-1	103	-1
410	CANAL I	14600	1	14600	-1	125	-1	8138	1	8138	-1	45	-1
411	MONTI GRANDE (VOLTURNO)	16400	1	16400	-1	200	-1	7239	1	7239	-1	66	-1
412	CANAL II	17500	1	17500	-1	220	-1	8128	1	8128	-1	138	-1
413	FRANCOLISE	14000	1	14000	-1	75	-1	8088	1	8088	-1	44	-1
414	SANTA MARIA OLIVETO	16870	1	16870	-1	416	-1	6321	1	6321	-1	185	-1
415	MONTI CAMINO I	19513	1	19513	-1	240	-1	6750	1	6750	-1	33	-1
416	MONTI LUNGO	16600	1	16600	-1	361	-1	6566	1	6566	-1	142	-1
417	POZZILLI	17404	1	17404	-1	155	-1	6566	1	6566	-1	25	-1
418	MONTI CAMINO II	7942	1	7942	-1	34	-1	5200	1	5200	-1	310	-1
419	MONTI ROTONDO	16350	1	16350	-1	165	-1	7942	1	7942	-1	118	-1
420	CALABRITTO	17765	1	17765	-1	250	-1	7588	1	7588	-1	20	-1

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK ATR CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINST STR	DEF TOTAL STR	DEF ATR CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINST STR
SEQNO	NAME	STRA	CODEA	INTSTA	RRPA	CASA	FINSTA	STRD	CODED	INTSTD	RRPD	CASD	FINSTD
421	MONTE CAMINO III	20744	1	20744	-1	550	-1	3288	1	3288	-1	141	-1
422	MONTE MAGGIORE	5551	1	5551	-1	80	-1	3288	1	3288	-1	20	-1
423	APRILIA I	19350	1	19350	-1	1158	-1	6750	1	6750	-1	130	-1
424	THE FACTORY	15317	1	15317	0	366	14951	17976	1	17976	0	62	17914
425	CAMPOLEONE	17766	1	17766	-1	742	-1	15098	1	15098	-1	221	-1
426	CAMPOLEONE COUNTERATTACK	26029	1	26029	-1	1318	-1	9834	1	9834	-1	1450	-1
427	CARROCCO	26490	1	26490	-1	341	-1	4515	1	4515	-1	369	-1
428	MOLETTA RIVER DEFENSE	7418	1	7418	-1	167	-1	5000	1	5000	-1	107	-1
429	APRILIA II	27518	1	27518	0	270	27248	17730	1	17730	0	311	17419
430	FACTORY COUNTERATTACK	13400	1	13400	-1	101	-1	7077	1	7077	-1	206	-1
431	BOWLING ALLEY	41974	1	41974	-1	2238	-1	20496	1	20496	-1	1018	-1
432	MOLETTA RIVER II	21478	1	21478	-1	1451	-1	9761	1	9761	-1	1693	-1
433	FIOCCIA	15637	1	15637	-1	265	-1	19613	1	19613	-1	403	-1
434	SANTA MARIA INFANTE	18702	1	18702	-1	531	-1	9250	1	9250	-1	1035	-1
435	SAN MARTINO	17970	1	17970	-1	1974	-1	8141	1	8141	-1	720	-1
436	CASTELLONORATO	16458	1	16458	-1	537	-1	7500	1	7500	-1	442	-1
437	SPIGNO	18308	1	18308	-1	343	-1	8215	1	8215	-1	730	-1
438	FORMIA	23190	1	23190	-1	405	-1	7627	1	7627	-1	721	-1
439	MONTE GRANDE (ROME)	13095	1	13095	-1	203	-1	4563	1	4563	-1	332	-1
440	ITRI-FONDI	17912	1	17912	-1	257	-1	6653	1	6653	-1	380	-1
441	TERRACINA	18030	1	18030	-1	287	-1	6653	1	6653	-1	380	-1
442	MOLETTA OFFENSIVE	17345	1	17345	-1	234	-1	12569	1	12569	-1	468	-1
443	ANZIO-ALBANO ROAD	17313	1	17313	-1	194	-1	11343	1	11343	-1	107	-1
444	ANZIO BREAKOUT	22374	1	22374	-1	710	-1	12815	1	12815	-1	1355	-1
445	CISTERNA	19971	1	19971	-1	1524	-1	11928	1	11928	-1	1617	-1
446	SEZZE	17925	1	17925	-1	162	-1	6957	1	6957	-1	227	-1
447	VELLETRI	20683	1	20683	0	767	19916	12327	1	12327	0	1319	11008
448	CAMPOLEONE	19047	1	19047	-1	517	-1	10593	1	10593	-1	580	-1
449	VILLA CROCETTA	18000	1	18000	-1	263	-1	13715	1	13715	-1	598	-1
450	ARDEA	15557	1	15557	-1	245	-1	7659	1	7659	-1	374	-1
451	FOSSO DI CAMPOLEONE	29711	1	29711	-1	1304	-1	15801	1	15801	-1	1379	-1
452	LANUVIO	17300	1	17300	-1	825	-1	6108	1	6108	-1	698	-1
453	LARIANO	22641	1	22641	-1	329	-1	13012	1	13012	-1	1178	-1
454	VIA ANZIATE	23604	1	23604	-1	316	-1	19255	1	19255	-1	884	-1
455	VALMONTONE	26607	1	26607	-1	710	-1	10111	1	10111	-1	568	-1
456	TARTO-TIBER	38011	1	38011	-1	572	-1	10855	1	10855	-1	850	-1
457	IL GIOGIO PASS	15721	1	15721	0	560	15161	3700	1	3700	-1	560	-1
458	ST. LO	18228	1	18228	-1	2777	-1	7500	1	7500	-1	2350	-1
459	OPERATION GOODWOOD	76213	1	76213	-1	4011	-1	57500	1	57500	-1	5000	-1
460	OPERATION COBRA	126000	1	126000	-1	1510	-1	30700	1	30700	-1	5000	-1
461	MORTAIN	25497	1	25497	-1	4800	-1	27673	3	13690	13983	2673	25000
462	CHARTRES	15646	1	15646	0	113	15533	8325	1	8325	0	579	7746

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BATTLE SEQ. NO.	BATTLE NAME	ATK STR	ATK CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINAL STR	DEF TOTAL STR	DEF CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINAL STR
SEQNO	NAME	STR	CODEA	INTSTA	REPA	CASA	FINSTA	STRD	CODED	INTSTD	REPDO	CASD	FINSTD
463	MELUN	17232	1	17232	0	99	17133	6000	1	6000	0	362	5638
464	SEINE RIVER	40619	1	40619	-1	234	-1	15000	1	15000	-1	906	-1
465	MOSELLE-METZ	59631	1	59631	-1	1647	-1	41500	1	41500	-1	1700	-1
466	METZ	60794	1	60794	0	359	60435	39580	1	39580	0	210	39370
467	ARRACOURT	7500	3	-1	-1	779	-1	4800	1	4800	-1	119	-1
468	WESTWALL	32283	2	25345	12006	1477	35874	19632	2	10844	16290	3616	23518
469	SCHMIDT	20493	2	-1	3903	3683	-1	20250	3	-1	-1	3000	17250
470	SEILLE-MJED	99583	1	99583	-1	4265	-1	23588	1	23588	-1	4880	-1
471	FORET DE CHATEAU-SALINS	43587	1	43587	-1	720	-1	11185	1	11185	-1	446	-1
472	MORHANGE	25881	1	25881	-1	1006	-1	7555	1	7555	-1	197	-1
473	MORHANGE-FAULQUEMONT	92393	1	92393	-1	3223	-1	28382	1	28382	-1	2665	-1
474	BOURGALTROFF	10348	1	10348	-1	185	-1	6519	1	6519	-1	141	-1
475	SARRE-ST. AVOLD	88941	1	88941	-1	3279	-1	32396	1	32396	-1	4942	-1
476	BAERENDORF I	7935	1	7935	-1	58	-1	5366	1	5366	-1	224	-1
477	BAERENDORF II	15871	1	15871	0	56	15815	6999	1	6999	0	233	6766
478	BURBACH-DURSTEL	16232	1	16232	-1	110	-1	6713	1	6713	-1	616	-1
479	DURSTEL-FAERBERSVILLER	90078	1	90078	-1	482	-1	30712	1	30712	-1	811	-1
480	SARRE-UNION	19773	1	19773	-1	234	-1	6044	1	6044	-1	129	-1
481	SARRE-SINGLING	89977	1	89977	-1	835	-1	31501	1	31501	-1	1774	-1
482	SINGLING-BINING	15224	1	15224	0	155	15069	5044	1	5044	0	121	4923
483	SAUER RIVER	10000	3	-1	-1	268	9732	8634	3	-1	-1	134	8500
484	ST. VITH	87000	3	-1	-1	4306	82694	19996	3	-1	-1	1731	18265
485	BASTOGNE	36678	3	-1	-1	3000	33678	4849	3	-1	-1	1151	3698
486	SEDAN-MEUSE RIVER	48000	1	48000	-1	800	-1	60000	1	60000	-1	5000	-1
487	JITRA	7000	1	7000	0	600	6400	12000	1	12000	0	1200	10800
488	ROVNO	132000	1	132000	-1	3960	-1	150000	1	150000	-1	88000	-1
489	DEFENSE OF MOSCOW	1100000	1	1100000	-1	253000	-1	1372000	1	1372000	-1	85000	-1
490	MOSCOW COUNTEROFFENSIVE	1060300	1	1060300	-1	139000	-1	880000	1	880000	-1	85300	-1
491	POGORELOYE GORODISHCHE	54180	1	54180	37300	21327	70153	12035	1	12035	33872	6534	39373
492	LENINGRAD	120000	1	120000	-1	28000	-1	30000	1	30000	-1	4150	-1
493	OBOYAN-KURSK (PHASE I)	62000	1	62000	-1	1364	-1	45000	1	45000	-1	5680	-1
494	OPERATION CITADEL (SOUTHERN SECTOR)	140000	1	140000	0	3180	136820	75000	1	75000	0	4900	70100
495	OBOYAN-KURSK (PHASE II)	60000	3	-1	-1	3500	56500	149000	3	-1	-1	25800	123200
496	OBOYAN-KURSK (PHASE III)	56000	1	-1	-1	2900	-1	129000	1	-1	-1	30200	-1
497	PROKHOROVKA	78000	1	78000	-1	5700	-1	82300	1	82300	-1	5100	-1
498	KURSK COUNTEROFFENSIVE	980600	1	980600	-1	117700	-1	280000	1	280000	-1	39500	-1
499	BELGOROD	70000	1	70000	-1	11676	-1	15000	1	15000	-1	2405	-1
500	MELITOPOL	524724	1	524724	-1	79000	-1	210000	1	210000	-1	36500	-1
501	KORSUM-SCHEVCHENKOVSKIY	254950	1	254950	-1	63500	-1	84500	1	84500	-1	68000	-1
502	NIKOPOL BRIDGEHEAD	25100	1	25100	0	610	24490	8230	1	8230	0	480	7750
503	SEVASTOPOL	397607	1	397607	-1	35300	-1	72000	1	72000	0	48500	23500
504	BEREZINA RIVER	16100	1	16100	-1	670	-1	8500	1	8500	-1	4795	-1

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK STR	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINSTA	DEF TOTAL STR	DEF STR	DEF CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINSTO
SEQNO	NAME	STR	CODEA	INSTA	REPA	CASA	FINSTA	STRD	STRD	CODED	INTSTD	RRPD	CASD	FINSTD
505	LVOV-SANDOMIERZ	1200000	1	1200000	-1	37400	-1	900000	-1	3	-1	-1	198000	702000
506	BRODY (PHASE I)	39000	1	39000	0	980	38020	3300	3300	1	3300	0	720	2580
507	BRODY (PHASE II)	38500	1	38500	0	1750	36750	12900	12900	1	12900	0	490	12410
508	VISTULA RIVER (PHASE D I)	12700	1	12700	-1	1150	-1	5100	5100	1	5100	-1	320	-1
509	VISTULA RIVER (PHASE D II)	17550	1	17550	-1	3040	-1	6400	6400	1	6400	-1	785	-1
510	YASSY-KISHINEV	1250000	1	1250000	-1	135000	-1	800000	800000	1	800000	-1	690000	-1
511	VISTULA-ODER	2200000	1	2200000	-1	46900	-1	560000	560000	1	560000	-1	147400	-1
512	EAST PRUSSIA	1220000	1	1220000	-1	112000	-1	780000	780000	1	780000	-1	126000	-1
513	CIECHANOW (PHASE I)	10800	1	10800	-1	685	-1	3100	3100	1	3100	-1	145	-1
514	CIECHANOW (PHASE II)	12115	1	12115	-1	850	-1	3900	3900	1	3900	-1	230	-1
515	SEELOW HEIGHTS	13600	2	13293	1110	474	13929	3710	3782	2	3782	0	150	3632
516	MUTANKIANG	147000	1	147000	-1	10000	-1	75000	75000	1	75000	-1	36000	-1
517	TARAWA-BETIO	9000	3	5000	4000	3302	5698	4836	4836	1	4836	0	4836	0
518	IWO JIMA - INTO THE MAIN DEFENSES	33915	1	33915	-1	6845	-1	18300	18300	1	18300	-1	15615	-1
519	IWO JIMA - SUKIBACHI	3200	1	3200	-1	510	-1	1600	1600	3	1600	0	1231	369
520	IWO JIMA - FINAL PHASE	32000	1	32000	-1	3885	-1	2685	2685	3	2685	0	2685	0
521	ADVANCE FROM THE BEACH	22888	1	22888	-1	158	-1	1400	1400	1	1400	-1	628	-1
522	ADVANCE THROUGH THE OUTPOSTS	18398	1	18398	-1	286	-1	2900	2900	1	2900	-1	2120	-1
523	TOMB HILL-OUKI	18111	1	18111	-1	466	-1	4731	4731	1	4731	-1	1278	-1
524	SKYLINE RIDGE-ROCKY CRAGS	16291	1	16291	-1	740	-1	2600	2600	1	2600	-1	1661	-1
525	KOCHI RIDGE-ONAGA I	14594	1	14594	-1	269	-1	5000	5000	1	5000	-1	1324	-1
526	KOCHI RIDGE-ONAGA II	15986	1	15986	-1	182	-1	4500	4500	1	4500	-1	814	-1
527	KOCHI RIDGE-ONAGA III	15764	1	15764	-1	398	-1	4050	4050	1	4050	-1	2276	-1
528	JAPANESE COUNTERATTACK	6850	1	6850	-1	3704	-1	15350	15350	1	15350	-1	339	-1
529	KOCHI RIDGE IV	15109	1	15109	-1	114	-1	5140	5140	1	5140	-1	1464	-1
530	SHURI ENVELOPMENT (PHASE I)	16043	1	16043	-1	170	-1	3338	3338	1	3338	-1	478	-1
531	JAPANESE COUNTERATTACKS	4000	1	4000	0	1269	2731	15777	15777	1	15777	0	241	15536
532	SHURI ENVELOPMENT (PHASE II)	15840	1	15840	-1	124	-1	3000	3000	1	3000	-1	434	-1
533	SHURI ENVELOPMENT (PHASE III)	15205	1	15205	-1	182	-1	2600	2600	1	2600	-1	2564	-1
534	HILL 95-I	16091	1	16091	-1	193	-1	3500	3500	1	3500	-1	1222	-1
535	HILL 95-II	16002	1	16002	-1	248	-1	2500	2500	1	2500	-1	1470	-1
536	YAEJU-DAKE	5237	1	5237	-1	48	-1	2500	2500	1	2500	-1	2401	-1
537	HILLS 153 AND 115	15808	1	15808	-1	317	-1	2000	2000	1	2000	-1	1971	-1
538	ADVANCE FROM THE BEACH	19082	1	19082	-1	282	-1	2000	2000	1	2000	-1	1588	-1
539	ADVANCE TO SHURI LINE OUTPOSTS	18388	1	18388	-1	555	-1	2900	2900	1	2900	-1	2470	-1
540	KAKAZU AND TOMBSTONE RIDGES	21247	1	21247	-1	1079	-1	3000	3000	1	3000	-1	2468	-1
541	WISHIBARJ RIDGE-TANABARU ESCARPMENT	17163	1	17163	-1	879	-1	3000	3000	1	3000	-1	2860	-1
542	MAEDA ESCARPMENT	18095	1	18095	-1	479	-1	3900	3900	1	3900	-1	3810	-1
543	ATTACK ON SHURI LINE'S EASTERN FLANK I	19714	1	19714	-1	502	-1	5284	5284	1	5284	-1	4038	-1
544	ATTACK ON SHURI LINE'S EASTERN FLANK II	20973	1	20973	-1	590	-1	4757	4757	1	4757	-1	4328	-1
545	ATTACK ON SHURI LINE'S EASTERN FLANK III	19658	1	19658	-1	313	-1	4227	4227	1	4227	-1	3022	-1
546	ADVANCE TO YUZA-DAKE/YAEJU-DAKE ESCARPMENT	18777	1	18777	-1	112	-1	4000	4000	1	4000	-1	798	-1

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK ATR CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINAL STR	FINSTA	STRD TOTAL STR	DEF CODE	DEF INITIAL STR	DEF REIN/ REPL	CASD	DEF FINAL STR
SEQNO	NAME	STRA	CODEA	INTSTA	RERPA	CASA	FINSTA	STRD	CODED	INTSTD	RERPD	CASD	FINSTD	
547	ATTACK ON YUZA-DAKE/YAEJU-DAKE ESCARPMENT	18660	1	18660	-1	88	-1	4250	1	4250	-1	1006	-1	
548	CAPTURE OF YUZA-DAKE/YAEJU-DAKE ESCARPMENT	19047	1	19047	-1	576	-1	3250	1	3250	-1	3200	-1	
549	JENIN	10900	1	10900	0	225	10675	6160	1	6160	0	200	5960	
550	JERUSALEM	27682	3	-1	-1	1750	25932	13600	1	13600	0	1500	12100	
551	KABATIYA	12800	3	-1	-1	375	12425	9900	3	-1	-1	350	9550	
552	TILFIT-ZABABIBA	5350	1	5350	0	250	5100	5450	1	5450	0	250	5200	
553	NABLUS	10700	1	10700	0	375	10325	8640	3	-1	-1	350	8290	
554	RAFAH	19520	1	19520	0	700	18820	19500	1	19500	0	2700	16800	
555	BIR LAHFAN	10450	3	-1	-1	90	10360	10050	1	10050	0	1350	8700	
556	ABU AGEILA-UM KATEF	19280	1	19280	0	300	18980	18450	1	18450	0	900	17550	
557	EL-ARISH	6912	1	6912	0	135	6777	12750	1	12750	0	225	12525	
558	JEBEL LIBNI	10800	1	10800	0	70	10730	3000	1	3000	0	450	2550	
559	GAZA STRIP	12150	1	12150	0	55	12095	17450	1	17450	0	626	16824	
560	BIR MASSNA-BIR THAMADA	8700	3	-1	-1	60	8640	3000	3	-1	-1	550	2450	
561	MITLA PASS	22000	1	22000	0	550	21450	7250	3	-1	-1	90	7160	
562	BIR HAMA-BIR GIFGAFA	10200	3	-1	-1	75	10125	13500	3	-1	-1	550	12950	
563	NAKHL	18780	1	18780	0	60	18720	18450	1	18450	0	625	17825	
564	BIR GIFGAFA	3500	1	3500	0	450	3050	3600	3	-1	-1	60	3540	
565	TEL FAHAR-BANIAS	5375	1	5375	0	300	5075	8160	1	8160	0	850	7310	
566	RAWIYEH	5350	1	5350	0	150	5200	4350	1	4350	0	300	4050	
567	ZAOURA-KALA	5850	1	5850	0	230	5620	8560	1	8560	0	500	8060	
568	KERAMA	11940	1	11940	0	201	11739	16168	1	16168	0	497	15671	
569	SUEZ CANAL ASSAULT, NORTH	29490	3	-1	-1	400	29090	4455	1	4455	0	275	4180	
570	SUEZ CANAL ASSAULT, SOUTH	22850	3	-1	-1	350	22500	3020	3	-1	-1	225	2795	
571	SECOND ARMY BUILDUP	63910	3	-1	-1	800	63110	14000	3	-1	-1	450	13550	
572	THIRD ARMY BUILDUP	45160	3	-1	-1	750	44410	10980	3	-1	-1	400	10580	
573	KANTARA-FIRDAN	25850	1	25850	0	700	25150	67440	1	67440	0	700	66740	
574	EGYPTIAN OFFENSIVE, NORTH	81160	1	81160	0	1700	79460	43400	1	43400	0	380	43020	
575	EGYPTIAN OFFENSIVE, SOUTH	57960	1	57960	0	1350	56610	28600	1	28600	0	260	28340	
576	DEVERSOIR (CHINESE FARM I)	22790	3	-1	-1	100	22690	30970	3	-1	-1	500	30470	
577	DEVERSOIR (CHINESE FARM II)	28900	1	28900	0	950	27950	36840	3	-1	-1	2400	34440	
578	DEVERSOIR WEST	19600	1	19600	0	300	19300	18180	1	18180	0	800	17380	
579	ISMAILIA	17000	3	-1	-1	600	16400	23860	3	-1	-1	1800	22060	
580	JEBEL GENEIFA	16200	3	-1	-1	300	15900	35633	3	-1	-1	1650	33983	
581	SHALLUFA I	16200	1	16200	0	150	16050	25600	1	25600	0	1100	24500	
582	SHALLUFA II	11700	1	11700	0	150	11550	22570	1	22570	0	1100	21470	
583	SUEZ	14681	1	14681	0	340	14341	22570	1	22570	0	1100	21470	
584	ADABIYA	10900	1	10900	0	75	10825	14620	1	14620	0	400	14220	
585	KUNEITRA	17750	3	-1	-1	350	17400	3630	3	-1	-1	200	3430	
586	AHMADIYEH	22750	3	-1	-1	700	22050	5745	3	-1	-1	250	5495	
587	RAFID	19525	1	19525	0	350	19175	4958	1	4958	0	250	4708	
588	YEHUDA-EL AL	21984	3	-1	-1	500	21484	6300	3	-1	-1	150	6150	

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	FINSTA STR	DEF TOTAL STR	DEF CODE	DEF INITIAL STR	DEF REIN/ REPL	CASD	DEF CAS	DEF FINAL STR
SEQNO	NAME	STRA	CODEA	INTSTA	RERPA	CASA	FINSTA	STRO	CODED	INTSTD	RERPD	CASD	DEF CAS	FINSTD
589	NAFEKH	12500	1	12500	0	500	12000	6946	3	-1	-1	250	6696	
590	TEL FARRIS	17833	3	-1	-1	450	17383	23750	3	-1	-1	1125	22625	
591	HUSHNIYAH	12733	3	-1	-1	450	12283	14683	3	-1	-1	1125	13558	
592	MOUNT HERMON I	31650	3	-1	-1	1200	30450	5395	3	-1	-1	400	4995	
593	MOUNT HERMON I	2692	1	2692	0	50	2642	1583	1	1583	0	100	1483	
594	TEL SHAMS	16100	3	-1	-1	525	15575	19400	3	-1	-1	1200	18200	
595	TEL SHAAR	14700	3	-1	-1	280	14420	21500	3	-1	-1	900	20600	
596	TEL EL HARA	12500	1	12500	0	450	12050	14300	1	14300	0	50	14250	
597	KFAR SHAMS-TEL ANTAR	11000	1	11000	0	100	10900	12000	1	12000	0	200	11800	
598	NABA	11500	1	11500	0	450	11050	11000	1	11000	0	100	10900	
599	ARAB COUNTEROFFENSIVE	35750	1	35750	0	550	35200	16100	1	16100	0	160	15940	
600	MOUNT HERMON II	5700	1	5700	0	150	5550	4750	1	4750	0	200	4550	
601	MOUNT HERMON III	11400	1	11400	0	100	11300	4750	1	4750	0	250	4500	
602	SIDI BOU ZID I	6400	1	6400	0	20	6380	5333	1	5333	0	920	4413	
603	SIDI BOU ZID II	2738	1	2738	0	367	2371	8380	1	8380	0	50	8330	
604	KASSERINE PASS	7000	1	7000	0	200	6800	5303	1	5303	0	527	4776	
605	RAPIDO NORTH I	8000	1	8000	0	408	7592	2200	1	2200	0	13	2187	
606	RAPIDO NORTH II	7600	1	7600	0	666	6934	2200	1	2200	0	13	2187	
607	RAPIDO SOUTH I	7700	1	7700	0	162	7538	1800	1	1800	0	13	1787	
608	RAPIDO SOUTH II	7538	1	7538	0	575	6963	1800	1	1800	0	13	1787	
609	BOWLING ALLEY I	14600	1	14600	0	1129	13471	4500	1	4500	0	442	4058	
610	BOWLING ALLEY II	15736	1	15736	0	613	15123	5050	1	5050	0	750	4300	
611	BOWLING ALLEY III	10000	1	10000	0	439	9561	4625	1	4625	0	199	4426	
612	MORTAIN I	8150	1	8150	0	700	7450	3700	1	3700	0	400	3300	
613	MORTAIN II	8500	1	8500	0	375	8125	4600	1	4600	0	600	4000	
614	SCHMIDT I	6200	1	6200	0	640	5560	5025	1	5025	0	850	4175	
615	SCHMIDT II	4350	1	4350	0	163	4187	3450	1	3450	0	100	3350	
616	SCHMIDT III	4950	1	4950	0	350	4600	3700	1	3700	0	200	3500	
617	WAHLERSCHIED	8300	1	8300	0	370	7930	1400	1	1400	0	250	1150	
618	KRINKELT-ROCHERATH I	3300	1	3300	0	100	3200	1357	1	1357	0	400	957	
619	KRINKELT-ROCHERATH II	9100	1	9100	0	900	8200	6600	1	6600	0	720	5880	
620	SCHNEE EIFEL CENTER	4100	1	4100	0	200	3900	3900	1	3900	0	3700	200	
621	SCHNEE EIFEL SOUTH	11000	1	11000	0	200	10800	4300	1	4300	0	300	4000	
622	SCHNEE EIFEL NORTH I	14300	1	14300	0	50	14250	2050	1	2050	0	127	1923	
623	SCHNEE EIFEL NORTH II	12800	1	12800	0	200	12600	4150	1	4150	0	3535	615	
624	OUR RIVER CENTER	43800	1	43800	0	900	42900	5340	1	5340	0	3300	2040	
625	OUR RIVER NORTH	16000	1	16000	0	770	15230	5740	1	5740	0	700	5040	
626	Pusan Perimeter	11000	3	-1	-1	110	-1	15200	3	-1	-1	430	-1	
627	Pusan Breakout	16600	3	-1	-1	380	-1	10300	3	-1	-1	940	-1	
628	Nam River	16400	3	-1	-1	230	-1	9000	3	-1	-1	1640	-1	
629	Kunson	16200	3	-1	-1	100	-1	7100	3	-1	-1	1350	-1	
630	Butte Line	29000	3	-1	-1	300	-1	30200	3	-1	-1	15810	-1	

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BATTLE SEQ. NO.	BATTLE NAME	ATK TOTAL STR	ATK ATR CODE	ATK INITIAL STR	ATK REIN/ REPL	ATK CAS	ATK FINAL STR	DEF TOTAL STR	DEF ATR CODE	DEF INITIAL STR	DEF REIN/ REPL	DEF CAS	DEF FINAL STR
SEQNO	NAME	STRA	CODEA	INTSTA	REPA	CASA	FINSTA	STRD	CODED	INTSTD	RERPD	CASD	FINSTD
631	Han River	25500	3	-1	-1	250	-1	27000	3	-1	-1	6120	-1
632	Chan River	26000	3	-1	-1	150	-1	12500	3	-1	-1	1560	-1
633	Pierce Line	27900	3	-1	-1	170	-1	35100	3	-1	-1	4780	-1
634	Kansas Line	30700	3	-1	-1	5730	-1	26900	3	-1	-1	470	-1
635	Iron Triangle	37000	3	-1	-1	1460	-1	13800	3	-1	-1	150	-1
636	Bayonette Line	13700	3	-1	-1	240	-1	35500	3	-1	-1	3160	-1
637	Targul Frumos	35170	3	-1	-1	-1	-1	13725	3	-1	-1	-1	-1
638	Mishmar Hayarden 1	4000	3	-1	-1	250	-1	2500	3	-1	-1	2500	-1
639	Mishmar Hayarden 2	3000	3	-1	-1	250	-1	2700	3	-1	-1	270	-1
640	Hiram	6000	3	-1	-1	650	-1	6000	3	-1	-1	2100	-1
641	Banias-Masaada	11400	3	-1	-1	50	-1	9080	3	-1	-1	500	-1
642	Boutmiya	17550	3	-1	-1	50	-1	16767	3	-1	-1	500	-1
643	Kuneitra	16500	3	-1	-1	50	-1	19300	3	-1	-1	500	-1
644	Tarto-Tiber	38011	3	-1	-1	572	-1	10855	3	-1	-1	850	-1
645	Bekka Valley	34500	3	-1	-1	1082	-1	25000	3	-1	-1	4150	-1
646	Acre	2500	3	-1	-1	10	-1	3000	3	-1	-1	10	-1
647	"Death to Invader"	2500	3	-1	-1	250	-1	3000	3	-1	-1	300	-1
648	El Auja "Ayin"	6000	3	-1	-1	350	-1	4000	3	-1	-1	600	-1
649	Ageila-Rafah "Ayin"	4000	3	-1	-1	400	-1	3000	3	-1	-1	600	-1
650	Abu Agelis-Um Katef	4700	3	-1	-1	318	-1	4800	3	-1	-1	3000	-1
651	Bir Rud Salim	2668	3	-1	-1	13	-1	3300	3	-1	-1	300	-1
652	Rafah-El Arish	10000	3	-1	-1	229	-1	10050	3	-1	-1	3433	-1
653	Gaza-Khan Yunis	4000	3	-1	-1	121	-1	6400	3	-1	-1	1987	-1
654	Quang Tri	30000	3	-1	-1	-1	-1	17000	3	-1	-1	14300	-1
655	Jerusalem "Jebussi"	3000	3	-1	-1	375	-1	3600	3	-1	-1	500	-1
656	Jerusalem Corridor	4500	3	-1	-1	150	-1	2500	3	-1	-1	250	-1
657	Ardennes	-1	0	-1	-1	-1	-1	-1	0	-1	-1	-1	-1
658	Cambrai	17000	3	-1	-1	-1	-1	12143	3	-1	-1	-1	-1
659	Arras	11821	3	-1	-1	-1	-1	18000	3	-1	-1	410	-1
660	Boos	189	3	-1	-1	-1	-1	189	3	-1	-1	-1	-1

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ACHIEV	ACHD	WMA	CRIT	PRI	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD	ATPCODE
SEQNO	NAME	KMDA	ACHA	ACHD	WMA	CRIT	PRI	ATK TACTIC	DEF TACTIC	BATDURN	SUMATP	PERIODS	ATPCODE
1	NIEUPORT	-6.40	3	8	-1	1	3	-2	-2	0.21	0.21	0	0
2	WHITE MOUNTAIN	1.00	8	2	1	1	3	-2	-2	0.04	0.04	0	0
3	WIMPFEN	1.00	7	3	1	1	3	-1	-1	0.65	0.48	0	0
4	DESSAU BRIDGE	-2.00	3	9	-1	1	3	-2	-2	1.00	1.00	1	1
5	LUTTER	3.00	7	3	1	1	3	-2	-2	1.00	1.00	1	1
6	BREITENFELD I	-2.00	4	9	-1	1	3	-2	-2	0.17	0.17	0	0
7	THE LECH	3.20	9	3	1	1	3	-2	-2	2.00	2.00	1	1
8	ALTE VESTE	0.00	4	8	-1	1	3	-2	-2	1.04	0.46	0	0
9	LUETZEN	1.50	9	5	1	1	3	-2	-2	0.38	0.38	0	0
10	NORDLINGEN I	-2.50	3	9	-1	1	3	-2	-2	0.29	0.29	0	0
11	WITTSTOCK	1.00	9	3	1	1	1	-2	-2	1.00	1.00	1	1
12	BREITENFELD II	1.00	9	3	1	1	1	-2	-2	0.13	0.13	0	0
13	ROCROI	1.00	8	3	1	1	1	-2	-2	0.27	0.27	0	0
14	TUTTLINGEN	2.00	9	2	1	1	3	-1	-1	1.00	1.00	1	1
15	FREIBURG	9.00	7	6	1	1	3	-1	-1	6.88	0.48	0	0
16	JANKAU	-2.00	6	6	-1	1	3	-1	-1	1.00	1.00	1	1
17	MERGENTHEIM	3.00	9	3	1	1	3	-1	-1	1.00	1.00	1	1
18	ALLERHEIM (NORDLINGEN II)	1.00	7	6	1	2	3	-2	-2	0.13	0.13	0	0
19	LENS	3.00	9	3	1	1	2	-2	-2	0.25	0.13	0	0
20	EDGEHILL	1.00	7	4	1	1	3	-2	-2	0.13	0.13	0	0
21	MARSTON MOOR	1.00	8	4	1	1	3	-2	-2	0.13	0.13	0	0
22	TIPPERMUR	-0.50	3	9	-1	1	3	-2	-2	1.00	1.00	1	1
23	KILSYTH	0.80	9	2	1	1	3	-1	-1	1.00	1.00	1	1
24	NEWBURY II	0.00	5	7	-1	2	3	-2	-2	0.17	0.17	0	0
25	NASEBY	-0.30	4	9	-1	1	3	-2	-2	0.13	0.13	0	0
26	PRESTON	-9999.00	9	3	1	1	3	-1	-1	2.00	2.00	1	1
27	DUNBAR	0.80	9	4	1	1	1	-1	-1	0.08	0.08	0	0
28	WORCESTER	2.00	9	4	1	1	3	-2	-2	0.15	0.15	0	0
29	ST. ANTOINE	1.00	8	5	1	1	3	-1	-1	0.25	0.25	0	0
30	THE DUNES	2.10	8	3	1	1	1	-2	-2	0.17	0.17	0	0
31	THE RAAB	0.00	4	9	-1	1	3	-2	-2	0.33	0.33	0	0
32	VIENNA	4.00	9	3	1	1	1	-1	-1	0.52	0.52	0	0
33	CHOCIM II	-9999.00	8	3	1	1	3	-1	-1	1.00	1.00	1	1
34	SINSHEIM	-9999.00	9	4	1	1	3	-2	-2	1.17	0.13	0	0
35	SENEF	0.00	8	5	0	2	3	-1	-1	0.58	0.58	0	0
36	ENZHEIM	2.40	6	6	0	2	3	-2	-2	1.33	0.29	0	0
37	TURCKHEIM	-9999.00	9	4	1	1	1	-1	-1	1.00	1.00	1	1
38	FEHRBELLIN	6.40	9	4	1	1	3	-2	-2	0.08	0.08	0	0
39	SEDGEMOOR	-1.00	2	7	-1	1	3	-2	-2	0.08	0.08	0	0
40	KILLIECRANKIE	0.80	8	2	1	1	3	-1	-1	0.05	0.05	0	0
41	WALCOURT	0.00	4	7	-1	1	3	-2	-2	0.40	0.40	0	0
42	FLEURUS	-9999.00	9	3	1	1	2	-1	-1	1.00	1.00	1	1

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD
SEQNO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1	PRD1	BATDURN	SUMATP	ATPCODE
43	THE BOYNE	2.00	9	5	1	1	3	-2	0.13	0.13	0
44	AUGHRIM	1.20	9	4	1	1	3	-1	0.25	0.25	0
45	STEENKERKE	0.00	3	7	-1	1	3	-1	0.29	0.29	0
46	NEERWINDEN (LANDEN)	1.00	8	3	1	1	3	-1	0.46	0.46	0
47	MARSAGLIA	2.40	9	2	1	1	3	-1	1.23	0.19	0
48	ZENTA	1.00	9	2	1	1	3	-1	0.19	0.19	0
49	POLTAVA	-6.00	4	8	-1	1	3	-2	1.00	1.00	1
50	BLENHEIM	2.70	9	3	1	1	3	-1	0.35	0.35	0
51	RAMILLIES	3.00	9	3	1	1	3	-1	0.25	0.25	0
52	OLDENARDE	2.40	9	3	1	1	3	-2	0.25	0.25	0
53	MALPLAQUET	1.40	8	7	1	1	3	-2	0.29	0.29	0
54	PETERWARDEIN	-9999.00	9	2	1	1	3	-2	0.21	0.21	0
55	MOLLWITZ	0.00	4	7	-1	1	3	-2	0.28	0.28	0
56	CHOTUSITZ	-2.70	5	8	-1	1	3	-2	0.17	0.17	0
57	DETTINGEN	1.20	6	3	1	1	3	-2	1.00	1.00	1
58	FONTENOY	0.00	4	8	-1	1	3	-2	0.33	0.33	0
59	HOHENFRIEDBERG	1.80	9	3	1	1	3	-2	0.29	0.29	0
60	SOOR	1.20	9	4	1	1	3	-1	0.17	0.17	0
61	KESSELDORF	2.00	9	3	1	1	3	-2	0.13	0.13	0
62	PRESTONPANS	1.00	9	3	1	1	3	-1	0.01	0.01	0
63	CULLOEN	0.00	3	9	-1	1	3	-2	0.03	0.03	0
64	LOBOSITZ	2.00	8	7	1	1	3	-2	0.17	0.17	0
65	PRAGUE	1.60	9	4	1	1	3	-2	0.17	0.17	0
66	PLASSEY	-1.00	2	9	-1	1	3	-2	0.38	0.38	0
67	KOLIN	0.00	5	8	-1	1	3	-2	0.29	0.29	0
68	HASTENBECK	1.00	5	3	1	2	3	-2	0.29	0.29	0
69	ROSSBACH	-2.00	3	9	-1	1	1	-2	0.06	0.06	0
70	LEUTHEN	3.20	10	3	1	1	1	-2	0.13	0.13	0
71	CREFELD	5.00	8	5	1	1	1	-2	0.21	0.21	0
72	ZORNDORF	1.00	7	5	1	2	3	-2	0.40	0.40	0
73	HOCHKIRCH	1.50	9	4	1	1	3	-1	0.13	0.13	0
74	BERGEN	-1.00	3	6	-1	2	3	-1	1.00	1.00	1
75	MINDEN	2.00	9	2	1	1	3	-1	0.21	0.21	0
76	KUNERSDORF	0.00	3	9	-1	1	3	-1	0.25	0.25	0
77	PLAINS OF ABRAHAM (QUEBEC)	-0.80	3	9	-1	1	3	-2	0.01	0.01	0
78	MAXEN	-9999.00	8	2	1	1	2	-1	0.27	0.27	0
79	WARBURG	7.00	9	2	1	1	1	-1	1.00	1.00	1
80	LIEGNITZ	-1.00	2	8	-1	1	1	-2	0.08	0.08	0
81	TORGAU	2.00	8	4	1	1	1	-1	0.33	0.33	0
82	BUNKER HILL	2.00	7	5	1	1	3	-1	0.17	0.17	0
83	QUEBEC	0.00	4	7	-1	1	3	-1	0.21	0.21	0
84	WHITE PLAINS	0.60	7	5	1	1	3	-1	0.38	0.38	0

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BATTLE SEQ. NO.	BATTLE NAME	ATK KN ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN	CRIT	PRI1	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM ACTIVE TIME	ACTIVE PERIOD	ATPCODE
SEQNO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1	ATK TACTIC	DEF TACTIC	BATDURN	SUMATP	PERIODS	CODE	
85	TRENTON	0.90	9	2	1	1	3	-1	0.06	0.06	0.06	0		
86	PRINCETON	1.50	8	2	1	1	3	-1	0.01	0.01	0.01	0		
87	FREEMAN'S FARM	1.00	5	5	0	2	3	-2	0.27	0.27	0.27	0		
88	GERMANTOWN	0.00	4	7	-1	1	3	-2	0.17	0.17	0.17	0		
89	BEMIS HEIGHTS	-3.20	4	9	-1	1	3	-2	0.04	0.04	0.04	0		
90	MONMOUTH COURT HOUSE	2.00	6	6	0	2	3	-1	0.29	0.29	0.29	0		
91	CAMDEN	1.50	7	3	1	1	3	-1	0.46	0.46	0.37	0		
92	COMPENS	-1.00	2	9	-1	1	3	-2	0.04	0.04	0.04	0		
93	GUILFORD COURT HOUSE	2.40	6	5	1	2	3	-2	0.08	0.08	0.08	0		
94	HOBKIRK'S HILL	3.20	9	3	1	1	3	-2	0.25	0.25	0.25	0		
95	EUTAW SPRINGS	0.00	4	5	-1	1	3	-1	0.16	0.16	0.16	0		
96	VALMY	0.00	3	4	-1	2	3	-1	0.20	0.20	0.20	0		
97	JENAPPE	4.00	6	4	1	1	3	-1	1.00	1.00	1.00	1		
98	NEERWINDEN	0.00	4	6	-1	1	3	-2	1.00	1.00	1.00	1		
99	HONDSCHOOTE	2.00	6	4	1	1	3	-1	1.00	1.00	1.00	1		
100	WATTIGNIES	3.00	5	4	1	1	3	-1	2.00	2.00	2.00	1		
101	FLEURUS	0.00	6	7	-1	2	3	-1	0.25	0.25	0.25	0		
102	LODI	2.00	8	3	1	1	3	-1	0.06	0.06	0.06	0		
103	CASTIGLIONE	2.50	8	3	1	1	1	-1	1.00	1.00	1.00	1		
104	NERESHEIM	0.00	5	4	1	2	3	-1	1.00	1.00	1.00	1		
105	MURZBURG	3.00	7	4	1	1	3	-1	0.43	0.43	0.43	0		
106	ARCOLA	3.00	8	3	1	1	3	-1	3.00	3.00	3.00	1		
107	RIVOLI	-3.20	3	9	-1	1	3	-2	2.00	2.00	2.00	1		
108	PYRAMIDS	3.00	9	2	1	1	-2	-1	0.04	0.04	0.04	0		
109	STOCKACH I	0.00	5	6	-1	1	3	-1	0.63	0.63	0.63	0		
110	MOUNT TABOR	0.00	1	8	-1	1	3	-2	0.42	0.42	0.42	0		
111	ZURICH I	0.00	4	6	-1	2	3	-1	1.00	1.00	1.00	1		
112	NOVI	2.00	7	3	1	1	3	-1	0.71	0.71	0.58	0		
113	ZURICH III	8.00	8	2	1	1	5	-2	2.00	2.00	2.00	1		
114	MOSKIRCH	1.00	5	4	1	1	3	-1	1.00	1.00	1.00	1		
115	MARENGO	-3.00	2	7	-1	1	3	-2	0.50	0.46	0.46	0		
116	HOHENLINDEN	0.00	3	7	-1	1	3	-2	0.40	0.40	0.40	0		
117	AUSTERLITZ	-7.00	2	10	-1	1	3	-2	0.38	0.38	0.38	0		
118	JENA	12.00	9	2	1	1	3	-2	0.39	0.39	0.39	0		
119	AUERSTADT	-6.00	2	10	-1	1	3	-2	0.33	0.33	0.33	0		
120	EYLAU	3.80	6	6	0	2	3	-2	0.58	0.58	0.58	0		
121	FRIEDLAND	8.00	9	3	1	1	3	-2	0.23	0.23	0.23	0		
122	VIMIERO	0.00	4	8	-1	1	3	-1	0.40	0.40	0.40	0		
123	CORUNNA	0.00	4	7	-1	1	3	-1	0.17	0.17	0.17	0		
124	ECKMUEHL	-1.00	4	8	-1	1	3	-2	0.25	0.25	0.25	0		
125	ASPERN-ESSLING	0.00	7	5	1	1	3	-1	1.08	0.65	0.65	0		
126	THE RAAB	2.00	8	4	1	1	3	-1	0.13	0.13	0.13	0		

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR WINA	WIN CRIT	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD	ATPCODE
SEQNO	NAME	KNOA	ACHA	ACHD	WINA	CRIT	PRI1	PRD1	BATURN	SUMATP	PERIODS CODE	ATPCODE
127	MAGRAM	3.00	7	4	1	1	1	-2	0.79	0.48	0	0
128	TALavera	3.00	5	6	-1	2	3	-1	0.54	0.22	0	0
129	BUSSACO	0.00	4	6	-1	2	3	-1	0.34	0.34	0	0
130	FUENTES DE ONORO	-2.40	5	6	-1	2	3	-2	0.29	0.29	0	0
131	ALBUERA	3.00	6	7	-1	2	1	-1	0.24	0.24	0	0
132	SALAMANCA	1.00	7	3	1	1	3	-2	0.16	0.16	0	0
133	VITTORIA	2.00	8	3	1	1	3	-2	0.46	0.46	0	0
134	BORODINO	2.00	7	6	1	1	3	-2	0.50	0.50	0	0
135	LUETZEN	0.00	4	6	-1	1	3	-2	0.39	0.39	0	0
136	BAUTZEN	10.00	6	4	1	1	3	-1	1.08	0.71	0	0
137	DRESDEN	-10.00	3	6	-1	1	3	-2	1.46	0.92	0	0
138	LEIPZIG	12.00	7	5	1	1	3	-2	3.23	0.98	0	0
139	HANAU	4.00	7	3	1	1	3	-1	1.08	0.52	0	0
140	LA ROTHIERE	1.00	8	7	1	1	3	-2	0.29	0.29	0	0
141	LAON	0.00	4	7	-1	1	3	-2	1.46	1.04	0	0
142	ARCIS-SUR-AUBE	1.00	7	4	1	2	3	-2	1.17	0.35	0	0
143	LIGNY	1.00	7	4	1	1	3	-1	0.31	0.31	0	0
144	QUATRE BRAS	0.00	6	7	-1	2	3	-1	0.29	0.29	0	0
145	WATERLOO	-2.00	3	8	-1	1	3	-2	0.42	0.42	0	0
146	THE THAMES	0.20	7	1	1	1	3	-1	0.01	0.01	0	0
147	CHIPPENNA	0.00	2	6	-1	1	3	-2	0.04	0.04	0	0
148	LUNDY'S LANE	0.00	3	4	-1	2	3	-1	0.25	0.25	0	0
149	NEW ORLEANS	0.00	3	8	-1	1	3	-1	0.03	0.03	0	0
150	BOYACA	0.50	9	3	1	1	3	-1	1.00	1.00	1	1
151	CARABOBO	2.00	9	4	1	1	3	-1	1.00	1.00	1	1
152	BOMBONA	0.50	7	6	1	2	3	-1	1.00	1.00	1	1
153	PICHINCHA	-1.00	3	8	-1	1	3	-2	0.13	0.13	0	0
154	JUNIN	0.30	9	3	1	1	3	-2	1.00	1.00	1	1
155	AYACUCHO	0.00	2	9	-1	1	3	-2	0.42	0.42	0	0
156	SAN JACINTO	0.30	9	1	1	1	3	-1	0.01	0.01	0	0
157	PALO ALTO	1.80	6	2	1	1	3	-2	0.21	0.21	0	0
158	RESACA DE LA PALMA	2.70	7	1	1	1	3	-1	0.06	0.06	0	0
159	BUENA VISTA	0.00	2	6	-1	1	3	-1	1.16	0.69	0	0
160	CERRO GORDO	6.00	8	1	1	1	3	-1	1.00	0.50	0	0
161	CONTRERAS	1.00	9	1	1	1	3	-1	0.01	0.01	0	0
162	CHURUBUSCO	11.20	7	2	1	1	3	-1	0.31	0.15	0	0
163	MOLINO DEL REY	0.80	7	2	1	1	3	-1	0.08	0.08	0	0
164	CHAPULTEPEC	4.50	9	2	1	1	3	-1	0.54	0.54	0	0
165	THE ALMA	3.00	6	3	1	1	3	-1	0.13	0.13	0	0
166	INKERMAN	0.00	3	5	-1	1	3	-2	0.30	0.30	0	0
167	MAGENTA	-9999.00	5	3	1	1	3	-2	0.38	0.38	0	0
168	SOLFERINO	3.00	5	3	1	1	3	-2	0.48	0.48	0	0

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN	CRIT	PRI1	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD	ATPCODE
SEQNO	NAME	KMDA	ACHA	ACHD	WINA						BATURN	SUMATP	PERIODS	
169	SADOMA	9.00	7	5	1	1	1	2	-2	0.33	0.33	0	0	
170	CUSTOZZA II	0.00	3	6	-1	1	1	3	-2	0.38	0.38	0	0	
171	FIRST BULL RUN (MANASSAS)	-3.20	4	6	-1	1	1	1	-2	0.29	0.29	0	0	
172	WILSON'S CREEK	-1.20	5	6	-1	1	1	3	-2	0.25	0.25	0	0	
173	BELMONT	0.00	6	5	1	2	3	-2	0.26	0.26	0.26	0	0	
174	MILL SPRINGS	-0.20	4	8	-1	1	1	3	-2	0.44	0.44	0	0	
175	FORT DONELSON	0.00	4	7	-1	1	1	3	-2	0.40	0.40	0	0	
176	PEA RIDGE	0.00	5	7	-1	1	1	1	-2	1.04	0.54	0	0	
177	KERNSTOWN	0.00	4	7	-1	1	1	3	-2	0.50	0.25	0	0	
178	SHILOH	0.00	4	6	-1	2	3	-2	1.46	0.90	0	0	0	
179	FRONT ROYAL	1.00	9	3	1	1	1	3	-1	0.15	0.15	0	0	
180	FIRST WINCHESTER	1.60	8	3	1	1	1	3	-1	0.06	0.06	0	0	
181	CROSS KEYS	0.00	3	9	-1	1	1	3	-2	0.13	0.13	0	0	
182	PORT REPUBLIC	1.60	8	5	1	1	1	3	-2	0.17	0.17	0	0	
183	SEVEN PINES (FAIR OAKS)	1.60	4	5	-1	2	3	-1	1.02	0.56	0	0	0	
184	MECHANICSVILLE	0.00	5	7	-1	2	3	-1	0.25	0.25	0	0	0	
185	GAINES'S MILL	0.50	5	6	-1	2	3	-1	0.35	0.33	0	0	0	
186	GLENDAL-FRAYSER'S FARM	0.00	5	6	-1	2	3	-1	1.50	0.42	0	0	0	
187	MALVERN HILL	0.00	4	6	-1	1	1	3	-1	0.23	0.15	0	0	
188	CEDAR MOUNTAIN	0.00	5	6	-1	1	1	3	-2	0.27	0.27	0	0	
189	SECOND BULL RUN (MANASSAS)	-1.60	3	9	-1	1	1	3	-2	1.60	0.94	0	0	
190	SOUTH MOUNTAIN	3.00	6	5	1	1	1	3	-1	0.54	0.54	0	0	
191	ANTIETAM	1.00	5	7	-1	2	3	-2	0.46	0.46	0	0	0	
192	CORINTH	6.00	5	7	-1	1	1	3	-1	1.13	0.44	0	0	
193	PERRYVILLE	0.50	5	5	0	2	3	-2	0.17	0.17	0	0	0	
194	FREDERICKSBURG	1.00	3	9	-1	1	1	3	-1	0.21	0.21	0	0	
195	MURFREESBORO	8.00	5	5	0	2	3	-1	2.63	0.63	0	0	0	
196	CHANCELLORSVILLE	-4.80	3	10	-1	1	1	1	-2	1.41	0.36	0	0	
197	CHAMPION'S HILL	2.00	8	4	1	1	1	3	-2	0.23	0.23	0	0	
198	BRANDY STATION	0.00	6	5	1	2	3	-2	0.50	0.50	0	0	0	
199	GETTYSBURG	3.30	4	6	-1	1	1	3	-1	2.21	0.79	0	0	
200	CHICKAMAUGA	3.20	6	4	1	1	1	3	-1	1.56	0.96	0	0	
201	CHATTANOOGA	8.80	8	4	1	1	1	3	-1	1.33	0.54	0	0	
202	THE WILDERNESS	0.00	4	5	-1	2	3	-2	1.53	1.16	0	0	0	
203	SPOTSVYLANDIA	1.40	5	6	-1	2	3	-2	11.00	11.00	1	1	1	
204	NEW MARKET	3.20	5	3	1	1	1	3	-1	0.46	0.46	0	0	
205	COLD HARBOR	0.00	5	7	-1	1	1	3	-1	0.38	0.38	0	0	
206	KENESAW MOUNTAIN	0.00	4	7	-1	1	1	3	-1	0.10	0.10	0	0	
207	PEACHTREE CREEK	0.00	3	7	-1	1	1	3	-1	0.13	0.13	0	0	
208	ATLANTA	1.50	3	6	-1	1	1	3	-1	0.29	0.29	0	0	
209	PETERSBURG	9.60	4	7	-1	1	1	3	-1	3.06	1.73	0	0	
210	GLOBE TAVERN	4.00	5	4	1	2	3	-1	4.00	4.00	1	1	1	

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD
SEQNO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1A	PRI1D	BATDURN	SUMATP	ATPCODE
211	OPEQUON CREEK	13.00	6	4	1	1	3	-1	0.50	0.50	0
212	CEDAR CREEK	-6.40	3	7	-1	1	3	-2	0.52	0.35	0
213	FRANKLIN	1.00	3	7	-1	1	3	-1	0.31	0.31	0
214	NASHVILLE	6.40	8	2	1	1	3	-1	1.36	0.48	0
215	BENTONVILLE	0.00	4	7	-1	1	3	-2	2.08	0.63	0
216	DINWIDDIE COURTHOUSE	3.00	5	5	0	2	3	-2	3.00	3.00	1
217	FIVE FORKS	3.00	8	3	1	1	3	-1	0.15	0.15	0
218	SELMA	0.60	8	2	1	1	3	-1	1.00	1.00	1
219	SAYLOR'S CREEK	1.00	8	2	1	1	3	-2	0.46	0.46	0
220	WEISSENBURG	2.40	7	4	1	1	3	-1	0.27	0.27	0
221	FROESCHWILLER	3.20	7	5	1	1	3	-1	0.38	0.38	0
222	SPITCHERN	1.00	7	6	1	2	3	-1	0.54	0.54	0
223	MARS LA TOUR	2.40	8	4	1	1	3	-2	0.50	0.50	0
224	GRAVELOTTE-ST. PRIVAT	4.00	8	3	1	1	3	-2	0.35	0.35	0
225	SEDAN	0.80	9	3	1	1	3	-2	0.54	0.54	0
226	COULMIERS	3.20	6	4	1	1	3	-1	0.29	0.29	0
227	ORLEANS	24.00	7	3	1	1	3	-1	3.00	3.00	1
228	LE MANS	5.40	7	3	1	1	3	-1	1.33	0.71	0
229	BELFORT	0.00	3	8	-1	1	3	-9	3.00	3.00	1
230	ISANDHLWANA	1.80	9	3	1	1	2	-1	0.17	0.17	0
231	LULUNDI	-2.00	3	8	-1	1	3	-2	0.04	0.04	0
232	MAJUBA HILL	3.00	9	3	1	1	3	-2	0.04	0.04	0
233	TEL EL-KEBIR	2.00	9	3	1	1	3	-1	0.09	0.09	0
234	OMDURMAN	-2.70	4	9	-1	1	3	-2	0.21	0.21	0
235	ADOWA	10.00	9	2	1	1	2	-1	1.00	1.00	1
236	MODDER RIVER	1.50	5	4	1	1	3	-1	0.42	0.42	0
237	MAGERSFONTEIN	0.00	3	8	-1	1	3	-1	0.38	0.38	0
238	COLENSO	0.00	2	8	-1	1	3	-1	0.44	0.44	0
239	SPION KOP	0.00	2	7	-1	1	3	-1	0.46	0.46	0
240	PAARDEBURG	0.50	5	5	0	2	3	-1	0.46	0.30	0
241	SAN JUAN HILL	1.60	6	4	1	1	3	-1	0.44	0.44	0
242	THE YALU	6.40	8	2	1	1	3	-1	1.38	1.00	0
243	TELISSU	9.60	9	2	1	1	3	-1	1.13	0.69	0
244	LIAOYANG	25.00	6	4	1	1	3	-2	10.00	10.00	1
245	THE SHA-HO	-23.80	4	5	-1	1	3	-2	14.00	14.00	1
246	SANDEPU	0.00	5	6	-1	1	3	-2	1.46	1.01	0
247	MUKDEN	48.60	7	4	1	1	3	-1	18.00	18.00	1
248	KUMANOVO	-9999.00	8	5	1	1	3	-2	1.29	0.96	0
249	LULE BURGAS	-9999.00	6	3	1	1	3	-2	5.00	5.00	1
250	PRELIP	-9999.00	7	5	1	1	3	-2	2.00	2.00	1
251	MONASTIR	6.00	7	2	1	1	1	-2	1.00	1.00	1
252	ADRIANOPOLE	9.90	8	4	1	1	3	-1	3.00	3.00	1

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN	CRIT	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD
SEQNO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1	PRD1	BATDURN	SUMATP	ATPCODE	
253	WARSAW	360.00	8	3	1	1	1	1	-1	12.00	12.00	1
254	THE NIEMAN	120.00	8	4	1	1	1	1	-2	6.00	6.00	1
255	GUADALAJARA-BRIHUEGA	-2.00	4	7	-1	1	1	3	-2	5.00	5.00	1
256	CHANGKUFENG-SHACHAOFENG	0.50	7	4	1	1	1	1	-2	0.25	0.25	0
257	HILL 52-SHACHAOFENG	0.00	4	6	-1	2	2	2	-1	0.94	0.54	0
258	CHANGKUFENG-HILL 52	1.00	5	6	-1	2	3	-2	5.00	5.00	1	
259	NOMONHAN-OPENING ENGAGEMENT	7.40	5	5	0	2	3	-2	2.00	2.00	1	
260	NOMONHAN-SOVIET COUNTEROFFENSIVE	21.60	7	4	1	1	3	-2	12.00	12.00	1	
261	SJOMUSSALMI	0.00	9	1	1	1	3	-2	29.00	29.00	1	
262	ALSACE-LORRAINE I	35.00	4	6	-1	2	3	-1	5.00	5.00	1	
263	ALSACE-LORRAINE II	56.00	8	3	1	1	3	-1	2.00	2.00	1	
264	THE ARDENNES	-28.00	3	6	-1	1	3	-1	2.00	2.00	1	
265	THE SAMBRE	12.00	6	4	1	1	3	-2	2.00	2.00	1	
266	MONS	5.00	6	5	1	1	3	-1	0.58	0.58	0	
267	LE CATEAU	3.00	6	4	1	1	3	-1	0.50	0.50	0	
268	GUISE	4.00	5	5	0	2	3	-2	0.58	0.58	0	
269	HEIGHTS OF NANCY	13.50	4	7	-1	1	3	-2	5.00	5.00	1	
270	OURCQ I	1.00	6	6	0	2	3	-2	1.00	1.00	1	
271	OURCQ II	8.00	6	6	0	2	3	-2	4.00	4.00	1	
272	PETIT MORIN	28.00	6	3	1	1	3	-1	4.00	4.00	1	
273	TWO MORINS	40.00	5	4	1	1	3	-1	4.00	4.00	1	
274	MARSHES OF ST.GOND	12.80	5	7	-1	1	3	-2	4.00	4.00	1	
275	VITRY LE FRANCOIS	0.00	5	6	-1	1	3	-2	4.00	4.00	1	
276	GAP OF REVIGNY	0.00	5	7	-1	1	3	-1	4.00	4.00	1	
277	THE AISNE	7.80	5	7	-1	2	3	-2	6.00	6.00	1	
278	STALLUPONEN	-11.20	3	6	-1	1	3	-2	0.38	0.38	0	
279	GUMBINEN	8.00	5	5	0	2	3	-2	0.50	0.50	0	
280	TANNENBERG	12.00	9	1	1	1	3	-2	4.00	4.00	1	
281	MASURIAN LAKES	85.00	8	2	1	1	3	-1	5.00	5.00	1	
282	KRASNIK	12.00	8	6	1	1	3	-1	3.00	3.00	1	
283	KOMAROV	10.00	5	3	1	1	3	-2	5.00	5.00	1	
284	GNILA LIPA	-65.00	2	8	-1	1	3	-2	5.00	5.00	1	
285	RAVA RUSSKA	8.00	3	8	-1	1	3	-2	8.00	8.00	1	
286	LOOZ	169.00	8	5	1	2	3	-2	13.00	13.00	1	
287	THE JADAR	-24.00	3	8	-1	1	3	-2	8.00	8.00	1	
288	THE KOLUBRA	98.00	8	2	1	1	3	-1	7.00	7.00	1	
289	EASTERN CHAMPAGNE	3.00	4	6	-1	2	3	-1	30.00	30.00	1	
290	NEUVE CHAPELLE	1.60	5	6	-1	2	3	-1	3.08	0.76	0	
291	YPRES II	6.60	5	6	-1	2	3	-1	33.00	33.00	1	
292	FESTUBERT	1.10	4	6	-1	2	3	-2	11.00	11.00	1	
293	LOOS	6.00	5	6	-1	2	3	-2	20.00	20.00	1	
294	WINTER BATTLE	150.00	8	2	1	1	2	-1	15.00	15.00	1	

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN	CRIT	PRI1	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD	ACTIVE TIME	PERIOD CODE
SEONO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1	ATK TACTIC	DEF TACTIC	BATDURN	SUMATP	ATPCODE			
295	GOLICE-TARNOM (OPENING PHASE)	30.00	8	3	1	1	3	3	-1	3.00	3.00	1			
296	FIRST ISONZO	0.00	3	6	-1	1	3	3	-1	15.00	15.00	1			
297	SECOND ISONZO	0.00	3	6	-1	1	3	3	-1	17.00	17.00	1			
298	THIRD ISONZO	0.00	4	6	-1	1	3	3	-1	18.00	18.00	1			
299	FOURTH ISONZO	0.00	4	6	-1	1	3	3	-1	23.00	23.00	1			
300	FIRST DARDANELLES LANDING	2.50	5	5	0	2	3	3	-2	0.73	0.69	0			
301	SUVLA BAY	4.00	4	5	-1	2	3	3	-2	4.00	4.00	1			
302	KUT-EL-AMARA	20.00	7	3	1	1	1	1	-1	2.00	2.00	1			
303	CTESTIPHON	1.50	4	6	-1	1	1	1	-2	3.00	3.00	1			
304	FIRST SOMME	12.00	4	5	-1	1	3	3	-2	92.00	92.00	1			
305	SOMME-FOURTH ARMY ATTACK	1.50	3	7	-1	1	3	3	-2	0.54	0.54	0			
306	SOMME-OVILLERS	0.00	3	7	-1	1	3	3	-2	0.50	0.50	0			
307	SOMME-BAZENTIN RIDGE	1.40	5	5	0	2	3	3	-2	0.69	0.69	0			
308	SOMME-FLERS-COURCELETTE	2.00	7	5	1	2	3	3	-1	0.63	0.63	0			
309	CAUCASUS WINTER OFFENSIVE	77.00	8	3	1	1	3	3	-1	7.00	7.00	1			
310	LAKE NAROTCH	0.00	4	6	-1	1	3	3	-1	9.00	9.00	1			
311	1916 BRUSILOV OFFENSIVE	61.20	7	3	1	1	3	3	-1	34.00	34.00	1			
312	FIFTH ISONZO	0.00	4	6	-1	2	3	3	-1	5.00	5.00	1			
313	ASIAGO	18.90	6	5	1	1	3	3	-1	27.00	27.00	1			
314	TRENTINO COUNTER-OFFENSIVE	12.00	6	5	1	1	3	3	-1	24.00	24.00	1			
315	SIXTH ISONZO (GORITZIA)	6.00	6	4	1	1	3	3	-1	12.00	12.00	1			
316	ARRAS	7.50	5	5	0	2	3	3	-2	15.00	15.00	1			
317	AINSE II	4.50	3	6	-1	1	3	3	-1	15.00	15.00	1			
318	MESSINES	4.80	7	4	1	1	3	3	-1	8.00	8.00	1			
319	YPRES III	78.00	5	6	-1	2	3	3	-1	130.00	130.00	1			
320	CAMBRAI I	8.40	7	5	1	1	3	3	-2	7.00	7.00	1			
321	CAMBRAI II	6.80	7	3	1	1	3	3	-1	4.00	4.00	1			
322	TENTH ISONZO	2.50	5	4	1	2	3	3	-2	25.00	25.00	1			
323	ELEVENTH ISONZO	8.70	5	4	1	2	3	3	-1	29.00	29.00	1			
324	CAPORETTO	130.20	8	2	1	1	3	3	-1	31.00	31.00	1			
325	TIGRIS CROSSING	8.10	8	4	1	1	3	3	-1	2.38	1.49	0			
326	GAZA I	0.00	4	8	-1	1	3	3	-1	1.34	0.49	0			
327	GAZA II	0.00	3	9	-1	1	3	3	-1	2.53	0.55	0			
328	GAZA III	12.00	9	4	1	1	3	3	-1	7.00	7.00	1			
329	JUNCTION STATION	40.00	8	2	1	1	3	3	-1	2.00	2.00	1			
330	SECOND SOMME-PERONNE	48.60	7	3	1	1	3	3	-1	6.00	6.00	1			
331	SECOND SOMME-PHASE I (SOMME-PERONNE)	28.00	5	5	0	2	3	3	-1	14.00	14.00	1			
332	LYS	22.00	7	5	1	1	3	3	-2	22.00	22.00	1			
333	YVONNE & ODETTE POSITIONS (SECTOR TOULON)	0.00	6	4	1	2	3	3	-1	0.08	0.08	0			
334	CHEMIN-DES-DAMES	48.00	3	5	-1	1	3	3	-2	8.00	8.00	1			
335	CANTIGNY	1.60	7	3	1	1	3	3	-1	0.51	0.11	0			
336	BELLEAU WOOD	0.50	4	4	0	2	3	3	-2	0.72	0.53	0			

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN CRIT	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD
SEQNO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1A	PRI1D	BATDURN	SUMATP	ATPCODE
337	HILL 142	0.90	6	4	1	1	3	-2	0.36	0.36	0
338	WEST WOOD I	0.00	2	7	-1	1	3	-1	0.17	0.17	0
339	BOURESCHES I	1.00	6	6	0	2	3	-1	0.19	0.19	0
340	HILL 192	0.80	3	7	-1	1	3	-2	0.42	0.42	0
341	WEST WOOD II	1.60	6	5	1	2	3	-2	0.19	0.19	0
342	NORTH WOOD I (HUNTING LODGE)	0.80	7	6	1	2	3	-2	0.13	0.13	0
343	BOURESCHES II	0.00	5	7	-1	1	3	-1	0.10	0.10	0
344	NORTH WOOD II	0.00	2	6	-1	1	3	-1	0.05	0.05	0
345	NORTH WOOD III	0.00	3	6	-1	1	3	-1	0.18	0.18	0
346	NORTH WOOD IV	0.70	7	3	1	1	3	-2	0.54	0.54	0
347	VAUX	1.50	7	3	1	1	3	-2	0.40	0.40	0
348	LA ROCHE WOOD EAST	1.50	7	3	1	1	3	-2	0.35	0.35	0
349	LA ROCHE WOOD WEST	1.50	7	3	1	1	3	-2	0.42	0.42	0
350	MOYON-MONTIDIER	11.50	4	6	-1	1	3	-2	5.00	5.00	1
351	CHAMPAGNE-MARNE	8.10	4	6	-1	1	2	-1	3.00	3.00	1
352	ATISNE-MARNE I	11.00	7	4	1	1	3	-1	2.00	2.00	1
353	MISSY AUX BOIS RAVINE	4.50	7	3	1	1	3	-1	0.48	0.48	0
354	BREUIL	4.40	7	3	1	1	3	-1	0.48	0.48	0
355	ST. AMAND FARM	2.00	8	2	1	1	3	-1	0.20	0.20	0
356	BEAUREPAIRE FARM	2.30	8	2	1	1	3	-1	0.20	0.20	0
357	CRAVANCON FERME-CHAUDUN	6.00	8	2	1	1	3	-1	0.27	0.27	0
358	CHAUDUN	3.50	8	2	1	1	3	-1	0.14	0.14	0
359	ATISNE-MARNE II	26.00	7	6	1	2	3	-1	13.00	13.00	1
360	BERZY LE SEC	3.50	8	2	1	1	3	-1	0.03	0.03	0
361	BUZANCY RIDGE	1.50	8	2	1	1	3	-1	1.00	1.00	1
362	PICARDY 1918, I	18.00	9	3	1	1	3	-1	4.00	4.00	1
363	PICARDY 1918, II	61.50	9	5	1	1	3	-1	15.00	15.00	1
364	ST. MIHIEL	22.50	8	5	1	1	1	-1	4.00	4.00	1
365	LAHAYVILLE-BOIS DE LAMARCHE	8.50	8	2	1	1	3	-1	0.52	0.52	0
366	MEUSE-ARGONNE I	15.20	7	4	1	1	3	-1	8.00	8.00	1
367	BLANC-MONT I	5.20	6	5	1	2	3	-2	4.00	4.00	1
368	MEDEAH FARM	3.10	8	2	1	1	3	-1	0.12	0.12	0
369	ESSEN HOOK	0.10	8	4	1	1	1	-1	1.00	1.00	1
370	BLANC MONT RIDGE	3.00	7	3	1	1	3	-1	0.15	0.15	0
371	SOMMEPY WOOD	3.00	8	2	1	1	3	-1	0.15	0.15	0
372	BLANC MONT II	0.30	6	6	0	2	3	-2	1.00	1.00	1
373	MEUSE-ARGONNE II	16.80	7	5	1	2	3	-2	28.00	28.00	1
374	EXERMONT-MONTREFAIGNE	2.10	5	5	0	2	3	-2	0.54	0.54	0
375	MAYACHE RAVINE	1.30	5	5	0	2	3	-1	0.50	0.50	0
376	LA NEUVILLE LE COMTE FERME	1.60	6	5	1	2	3	-1	1.00	1.00	1
377	FERME DES GRANGES-FLEVILLE	4.00	7	4	1	1	3	-1	0.06	0.06	0
378	HILL 212	2.50	6	5	1	2	3	-1	0.46	0.46	0

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN	CRIT	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD
SEQNO	NAME	KNDA	ACHA	ACHD	WINA	CRIT	PRI1	PRI1	PRI1	BATDURN	SUMATP	ATPCODE
379	BOIS DE BOYON-MONTREFAIGNE	1.30	6	5	1	2	3	-1	1.00	1.00	1.00	1
380	HILL 272	0.80	7	4	1	1	3	-2	0.10	0.10	0.10	0
381	MOUSE-ARGONNE III	16.50	6	4	1	1	3	-1	11.00	11.00	11.00	1
382	REMILLY-AILLICOURT	1.00	8	4	1	1	3	-1	0.17	0.17	0.17	0
383	HILL 252-PONT MAUGIS	2.90	6	4	1	1	3	-1	0.15	0.15	0.15	0
384	THE PIAVE	0.00	4	7	-1	1	3	-2	8.00	8.00	8.00	1
385	MEGIDDO	70.00	9	3	1	1	3	-1	2.00	2.00	2.00	1
386	ALAM HALFA	12.00	5	7	-1	1	1	-2	2.73	1.47	1.47	0
387	EL ALAMEIN II	26.00	8	4	1	1	3	-2	13.00	13.00	13.00	1
388	OPERATION LIGHTFOOT	6.00	7	6	1	2	3	-2	3.00	3.00	3.00	1
389	ALAMEIN BRIDGEHEAD EXPANSION	7.00	7	6	1	2	3	-2	7.00	7.00	7.00	1
390	OPERATION SUPERCHARGE	15.00	9	5	1	1	3	-1	3.00	3.00	3.00	1
391	CHOUJUI PASS	-1.60	3	8	-1	1	3	-2	0.02	0.02	0.02	0
392	EL GUETTAR	0.00	5	7	-1	1	3	-1	0.58	0.22	0.22	0
393	SEDJANNE-BIZERTE	44.00	7	4	1	1	3	-1	14.00	14.00	14.00	1
394	AMPHITHEATER	3.90	5	4	1	2	3	-2	3.00	3.00	3.00	1
395	PORT OF SALERNO	3.90	6	4	1	1	3	-2	3.00	3.00	3.00	1
396	SELE-CALORE CORRIDOR	3.70	5	6	-1	2	3	-2	0.58	0.58	0.58	0
397	BATTIPAGLIA I	1.60	3	7	-1	1	3	-1	4.00	4.00	4.00	1
398	VIETRI	1.60	3	7	-1	1	3	-1	4.00	4.00	4.00	1
399	TOBACCO FACTORY	4.00	4	7	-1	1	3	-1	1.06	0.45	0.45	0
400	BATTIPAGLIA II	2.40	7	5	1	1	3	-1	2.00	2.00	2.00	1
401	EBOLI	2.40	6	5	1	2	3	-1	2.00	2.00	2.00	1
402	VIETRI II	0.00	4	7	-1	1	3	-1	2.00	2.00	2.00	1
403	GRAZZANISE	3.60	7	4	1	1	5	-2	3.00	3.00	3.00	1
404	CAIAZZO	3.20	6	3	1	1	5	-1	1.65	0.99	0.99	0
405	CAPUA	0.00	2	8	-1	1	5	-1	1.00	1.00	1.00	1
406	CASTEL VOLTURNO	1.60	6	5	1	2	5	-2	2.00	2.00	2.00	1
407	MONTE ACERO	5.60	6	5	1	2	3	-1	2.00	2.00	2.00	1
408	TRIFISCO	4.80	7	3	1	1	5	-1	1.92	0.99	0.99	0
409	DRAGONI	5.70	5	6	-1	2	3	-1	3.00	3.00	3.00	1
410	CANAL I	1.00	6	5	1	2	5	-1	2.00	2.00	2.00	1
411	MONTE GRANDE (VOLTURNO)	2.40	6	5	1	2	3	-1	2.00	2.00	2.00	1
412	CANAL II	3.30	6	5	1	2	5	-1	3.00	3.00	3.00	1
413	FRANCOLISE	4.80	3	7	-1	1	3	-1	3.00	3.00	3.00	1
414	SANTA MARIA OLIVETO	3.20	6	5	1	2	3	-2	2.00	2.00	2.00	1
415	MONTE CAMINO I	4.80	3	7	-1	1	3	-1	3.00	3.00	3.00	1
416	MONTE LUNGO	3.20	5	6	-1	2	3	-1	2.00	2.00	2.00	1
417	POZZILLI	0.80	3	8	-1	1	3	-1	2.00	2.00	2.00	1
418	MONTE CAMINO II	0.90	7	2	1	1	3	-1	3.00	3.00	3.00	1
419	MONTE ROTONDO	0.90	5	5	0	2	3	-2	3.00	3.00	3.00	1
420	CALABRITTO	1.40	4	6	-1	2	3	-1	1.00	0.98	0.98	0

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN CRIT	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD
SEQNO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1	PRI2	BATDURN	SUMATP	ATPCODE
421	MONTE CAMINO III	4.80	7	3	1	1	3	-2	3.50	3.50	0
422	MONTE MAGGIORE	4.80	7	3	1	1	3	-1	1.02	1.02	0
423	APRILIA I	4.80	6	3	1	1	3	-1	2.00	2.00	1
424	THE FACTORY	0.00	2	7	-1	1	3	-1	1.00	1.00	1
425	CAMPOLEONE	6.90	6	5	1	2	3	-1	1.79	0.78	0
426	CAMPOLEONE COUNTERATTACK	4.00	6	5	1	2	2	-1	1.58	1.23	0
427	CARROCEO	2.80	4	6	-1	1	3	-2	0.83	0.83	0
428	MOLETTA RIVER DEFENSE	2.80	5	5	0	2	5	-1	3.00	3.00	1
429	APRILIA II	0.60	7	4	1	1	3	-1	0.54	0.54	0
430	FACTORY COUNTERATTACK	0.00	3	8	-1	1	3	-1	1.00	0.60	0
431	BOWLING ALLEY	2.80	4	6	-1	1	3	-2	3.43	2.05	0
432	MOLETTA RIVER II	2.00	7	5	1	1	5	-2	4.00	4.00	1
433	FIACCIA	0.00	3	8	-1	1	3	-1	3.00	3.00	1
434	SANTA MARIA INFANTE	3.20	7	4	1	1	3	-1	2.21	1.02	0
435	SAN MARTINO	1.20	6	5	1	2	3	-1	1.83	0.98	0
436	CASTELLONORATO	4.00	8	3	1	1	3	-1	1.38	0.88	0
437	SPIGNO	4.80	6	4	1	1	3	-1	1.21	0.46	0
438	FORMIA	8.70	6	3	1	1	3	-1	3.00	3.00	1
439	MONTE GRANDE (ROME)	2.40	7	4	1	1	3	-1	1.65	1.65	0
440	ITRI-FONDI	1.80	8	3	1	1	3	-1	3.00	3.00	1
441	TERRACINA	4.80	6	3	1	1	3	-1	1.77	1.35	0
442	MOLETTA OFFENSIVE	0.00	5	5	0	2	5	-2	1.21	0.81	0
443	ANZIO-ALBANO ROAD	0.00	5	5	0	2	3	-2	2.00	2.00	1
444	ANZIO BREAKOUT	14.40	7	3	1	1	3	-1	2.54	1.69	0
445	ANZIO RNA	14.40	7	3	1	1	3	-1	2.54	1.67	0
446	SLATZ	15.90	6	4	1	1	3	-1	3.00	3.00	1
447	VELLETRI	1.60	4	6	-1	1	3	-1	0.27	0.27	0
448	CAMPOLEONE	3.30	5	5	0	2	3	-2	3.00	3.00	1
449	VILLA CROGETTA	1.00	3	8	-1	1	3	-2	2.00	2.00	1
450	ARDEA	6.30	6	4	1	2	5	-1	3.00	3.00	1
451	FOSCO DI CAMPOLEONE	2.70	4	6	-1	1	3	-2	3.00	3.00	1
452	LANUVIO	2.40	3	6	-1	1	3	-2	4.00	4.00	1
453	LARIANO	4.40	7	3	1	1	3	-1	1.48	1.10	0
454	VIA ANZIATE	0.80	5	5	0	2	3	-2	1.72	1.26	0
455	VALMONTONE	5.20	8	3	1	1	3	-2	1.67	1.29	0
456	TARTO-TIBER	4.80	5	4	1	2	3	-1	2.00	2.00	1
457	IL GIOGIO PASS	4.00	6	3	1	1	3	-1	5.00	5.00	1
458	ST. LO	8.00	7	5	1	1	3	-2	8.00	8.00	1
459	OPERATION GOODWOOD	9.60	5	8	-1	1	3	-1	2.34	1.24	0
460	OPERATION COBRA	11.20	7	3	1	1	3	-1	3.00	3.00	1
461	MORTAIN	0.00	3	7	-1	1	3	-2	6.00	6.00	0
462	CHARTRES	6.00	5	5	0	2	2	-1	1.00	1.00	1

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN CRIT	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE TIME	PERIOD CODE
SENO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1	PRD1	BATDURN	SUMATP	ATPCODE	
463	MELUN	21.90	6	4	1	1	5	-1	3.00	3.00	1	1
464	SEINE RIVER	38.10	8	3	1	1	5	-1	3.00	3.00	1	1
465	MOSELLE-METZ	31.80	5	5	0	2	5	-2	6.00	6.00	1	1
466	METZ	0.00	3	7	-1	1	-9	-9	1.00	1.00	1	1
467	ARRACOURT	-3.20	3	6	-1	1	3	-2	3.38	0.89	0	0
468	WESTWALL	7.80	5	4	1	1	5	-2	5.31	2.71	0	0
469	SCHMIDT	4.80	3	8	-1	1	5	-2	12.00	12.00	1	1
470	SEILLE-NIED	14.00	7	5	1	1	5	-2	5.00	5.00	1	1
471	FORET DE CHATEAU-SALINS	4.20	6	5	1	2	3	-2	2.00	2.00	1	1
472	MORHANGE	6.60	6	4	1	1	3	-1	3.00	3.00	1	1
473	MORHANGE-FAULQUEMONT	6.80	8	6	1	1	3	-2	4.00	4.00	1	1
474	BOURGALTROFF	2.00	7	6	1	2	3	-1	1.14	0.74	0	0
475	SARRE-ST. AVOLD	21.60	7	5	1	1	3	-2	8.00	8.00	1	1
476	BAERENDORF I	1.00	6	4	1	1	5	-2	2.00	2.00	1	1
477	BAERENDORF II	5.00	6	5	1	2	3	-9	0.28	0.28	0	0
478	BURBACH-DURSTEL	3.90	6	5	1	2	3	-1	3.00	3.00	1	1
479	DURSTEL-FAERBERSVILLER	2.00	5	5	0	2	3	-2	2.00	2.00	1	1
480	SARRE-UNION	2.60	7	5	1	1	3	-2	2.00	2.00	1	1
481	SARRE-SINGLING	5.60	8	5	1	1	3	-1	2.00	2.00	1	1
482	SINGLING-BINING	1.40	5	5	0	2	3	-1	0.48	0.48	0	0
483	SAUER RIVER	6.40	5	4	1	1	5	-1	2.00	2.00	1	1
484	ST. VITH	30.00	5	5	0	2	3	-1	6.00	6.00	1	1
485	BASTOGNE	15.00	5	7	-1	2	3	-1	3.00	3.00	1	1
486	SEDAN-MEUSE RIVER	10.00	8	5	1	1	5	-2	2.00	2.00	1	1
487	JITRA	11.00	8	4	1	1	3	-1	0.79	0.63	0	0
488	ROVNO	120.00	8	3	1	1	3	-2	5.00	5.00	1	1
489	DEFENSE OF MOSCOW	357.50	5	6	-1	2	3	-2	65.00	65.00	1	1
490	MOSCOW COUNTEROFFENSIVE	143.00	7	5	1	1	3	-1	34.00	34.00	1	1
491	POGORELOYE GORODISHCHE	54.40	6	5	1	2	3	-2	7.55	4.89	0	0
492	LENINGRAD	7.00	7	4	1	1	3	-2	7.00	7.00	1	1
493	OBOVAN-KURSK (PHASE I)	12.90	6	5	1	2	3	-1	3.00	3.00	1	1
494	OPERATION CITADEL (SOUTHERN SECTOR)	8.00	6	4	1	1	3	-2	1.00	1.00	1	1
495	OBOVAN-KURSK (PHASE II)	22.80	6	5	1	2	3	-2	4.00	4.00	1	1
496	OBOVAN-KURSK (PHASE III)	3.00	4	7	-1	1	3	-2	5.00	5.00	1	1
497	PROKHOROVKA	0.00	5	4	1	2	3	-2	2.00	2.00	1	1
498	KURSK COUNTEROFFENSIVE	147.00	8	5	1	1	3	-2	21.00	21.00	1	1
499	BELGOROD	25.50	7	4	1	1	3	-1	3.00	3.00	1	1
500	MELITOPOL	319.80	8	6	1	1	3	-2	41.00	41.00	1	1
501	KORSUN-SCHEVCHENKOVSKIY	145.00	7	5	1	1	2	-2	25.00	25.00	1	1
502	MIKOPOL BRIDGEHEAD	6.00	6	4	1	1	3	-1	6.00	6.00	1	1
503	SEVASTOPOL	17.50	8	3	1	1	3	-1	5.00	5.00	1	1
504	BEREZINA RIVER	160.00	7	4	1	1	3	-1	5.00	5.00	1	1

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BA/TLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN	CRIT	PRI1	ATK TACTIC	DEF TACTIC	DURATION	BATTLE BATDURN	SUM TIME	ACTIVE PERIOD
SEQNO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1	PRID1	BATDURN	SUMATP	ATPCODE			
505	LVOV-SANDOMIERZ	319.60	8	3	1	1	1	3	-2	17.00	17.00	1		
506	BRODY (PHASE I)	8.00	7	6	1	2	3	-2	0.70	0.70	0			
507	BRODY (PHASE II)	7.00	7	6	1	2	3	-2	0.75	0.75	0			
508	VISTULA RIVER (PHASE D I)	3.90	6	5	1	1	5	-2	3.00	3.00	1			
509	VISTULA RIVER (PHASE D II)	2.40	5	6	-1	2	3	-2	6.00	6.00	1			
510	YASSY-KISHINEV	325.00	9	3	1	1	2	-2	10.00	10.00	1			
511	VISTULA-ODER	483.00	9	4	1	1	3	-2	23.00	23.00	1			
512	EAST PRUSSIA	125.40	7	3	1	1	3	-2	19.00	19.00	1			
513	CIECHANOW (PHASE I)	4.00	6	6	0	2	3	-2	1.00	1.00	1			
514	CIECHANOW (PHASE II)	4.00	6	5	1	2	3	-2	1.00	1.00	1			
515	SEELOW HEIGHTS	3.00	6	4	1	1	3	-1	2.00	2.00	1			
516	MUTANKIANG	160.00	9	2	1	1	5	-1	8.00	8.00	1			
517	TARAWA-BETIO	1.00	7	4	1	1	3	-2	3.18	2.01	0			
518	IWO JIMA - INTO THE MAIN DEFENSES	6.00	7	5	1	1	3	-2	5.00	5.00	1			
519	IWO JIMA - SURIBACHI	1.00	7	4	1	1	3	-1	5.00	5.00	1			
520	IWO JIMA - FINAL PHASE	1.20	8	4	1	1	3	-1	6.00	6.00	1			
521	ADVANCE FROM THE BEACH	10.20	8	4	1	1	3	-1	3.00	3.00	1			
522	ADVANCE THROUGH THE OUTPOSTS	3.20	7	6	1	1	3	-1	4.00	4.00	1			
523	TOMB HILL-OUKI	0.30	7	6	1	2	3	-2	3.00	3.00	1			
524	SKYLINE RIDGE-ROCKY CRAGS	1.50	8	5	1	1	3	-2	5.00	5.00	1			
525	KOCHI RIDGE-ONAGA I	0.00	3	7	-1	1	2	-1	3.00	3.00	1			
526	KOCHI RIDGE-ONAGA II	0.00	4	8	-1	1	1	-1	2.00	2.00	1			
527	KOCHI RIDGE-ONAGA III	0.40	3	7	-1	1	2	-2	4.00	4.00	1			
528	JAPANESE COUNTERATTACK	0.00	3	8	-1	1	3	-1	2.00	2.00	1			
529	KOCHI RIDGE IV	1.40	8	5	1	1	3	-1	2.00	2.00	1			
530	SHURI ENVELOPMENT (PHASE I)	1.00	7	4	1	1	1	-1	2.00	2.00	1			
531	JAPANESE COUNTERATTACKS	0.00	6	7	-1	2	3	-1	0.63	0.63	1			
532	SHURI ENVELOPMENT (PHASE II)	1.00	6	7	-1	2	3	-1	2.00	2.00	1			
533	SHURI ENVELOPMENT (PHASE III)	0.90	6	5	1	2	3	-1	3.00	3.00	1			
534	HILL 95-1	1.50	7	7	0	2	3	-1	3.00	3.00	1			
535	HILL 95-11	0.90	8	5	1	1	3	-1	3.00	3.00	1			
536	YAEJU-DAKE	0.30	8	5	1	1	3	-1	1.00	1.00	1			
537	HILLS 153 AND 115	0.90	8	5	1	1	3	-1	3.00	3.00	1			
538	ADVANCE FROM THE BEACH	6.60	6	4	1	1	3	-1	3.00	3.00	1			
539	ADVANCE TO SHURI LINE OUTPOSTS	1.60	6	5	1	2	3	-1	4.00	4.00	1			
540	KAKAZU AND TOMBSTONE RIDGES	0.40	4	7	-1	1	3	-2	4.00	4.00	1			
541	NISHIBARU RIDGE-TANABARU ESCARPMENT	1.50	6	4	1	1	3	-1	5.00	5.00	1			
542	MAEDA ESCARPMENT	1.60	5	4	1	2	3	-2	4.00	4.00	1			
543	ATTACK ON SHURI LINE'S EASTERN FLANK I	0.90	5	5	0	2	3	-2	3.00	3.00	1			
544	ATTACK ON SHURI LINE'S EASTERN FLANK II	0.50	5	5	0	2	3	-1	5.00	5.00	1			
545	ATTACK ON SHURI LINE'S EASTERN FLANK III	1.00	7	5	1	1	1	-1	2.00	2.00	1			
546	ADVANCE TO YUZA-DAKE/YAEJU-DAKE ESCARPMENT	2.00	5	3	1	1	3	-1	4.00	4.00	1			

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN CRIT	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD
SEQNO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1	PRD1	BATDURN	SUMATP	ATPCODE
547	ATTACK ON YUZA-DAKE/YAEJU-DAKE ESCARPMENT	0.60	5	5	0	2	3	-1	2.00	2.00	1
548	CAPTURE OF YUZA-DAKE/YAEJU-DAKE ESCARPMENT	1.80	7	2	1	1	3	-1	6.00	6.00	1
549	JENIN	5.00	7	4	1	1	3	-2	0.63	0.50	0
550	JERUSALEM	21.00	8	3	1	1	2	-2	1.76	1.16	0
551	KABATIYA	16.00	6	4	1	1	3	-1	1.04	0.67	0
552	TILFIT-ZABABIBA	8.00	6	4	1	1	3	-1	0.70	0.49	0
553	NABLUS	10.00	7	4	1	1	3	-1	0.25	0.25	0
554	RAFAH	10.00	8	4	1	1	2	-2	0.64	0.41	0
555	BIR LAHFAN	14.50	8	4	1	1	3	-2	0.56	0.56	0
556	ABU AGEILA-UM KATEF	20.00	9	3	1	1	1	-2	0.38	0.38	0
557	EL-ARISH	8.00	9	2	1	1	3	-1	0.46	0.46	0
558	JEBEL LIBNI	5.00	7	7	0	2	3	-1	0.15	0.15	0
559	GAZA STRIP	16.00	8	4	1	1	3	-1	1.91	1.20	0
560	BIR MASSNA-BIR THAMADA	28.00	7	3	1	1	3	-1	0.61	0.36	0
561	MITLA PASS	0.00	3	8	-1	1	3	-2	0.44	0.44	0
562	BIR NAMA-BIR GIFGIFA	25.00	7	4	1	1	1	-1	0.13	0.13	0
563	NAKHL	15.00	9	4	1	1	2	-1	0.19	0.19	0
564	BIR GIFGIFA	0.00	3	8	-1	1	3	-2	0.13	0.13	0
565	TEL FAHAR-BANIAS	5.00	8	2	1	1	3	-1	0.52	0.52	0
566	RAWIYEH	6.00	8	2	1	1	3	-1	0.17	0.17	0
567	ZAOURA-KALA	7.50	7	2	1	1	3	-1	0.35	0.35	0
568	KERAMA	0.00	6	6	0	2	3	-2	0.65	0.65	0
569	SUEZ CANAL ASSAULT, NORTH	5.00	8	4	1	1	5	-2	0.42	0.42	0
570	SUEZ CANAL ASSAULT, SOUTH	5.00	8	4	1	1	5	-2	0.42	0.42	0
571	SECOND ARMY BUILDUP	3.00	8	6	1	1	3	-2	0.94	0.94	0
572	THIRD ARMY BUILDUP	3.00	8	6	1	1	3	-2	0.94	0.94	0
573	KANTARA-FIRDAN	0.00	4	7	-1	1	3	-2	0.46	0.46	0
574	EGYPTIAN OFFENSIVE, NORTH	0.00	3	8	-1	1	3	-2	0.35	0.35	0
575	EGYPTIAN OFFENSIVE, SOUTH	0.00	5	8	-1	1	3	-1	0.35	0.35	0
576	DEVERSOIR (CHINESE FARM I)	7.00	7	4	1	1	1	-2	0.79	0.79	0
577	DEVERSOIR (CHINESE FARM II)	10.00	7	3	1	1	3	-2	1.21	0.75	0
578	DEVERSOIR WEST	5.00	8	5	1	1	3	-2	0.55	0.55	0
579	ISMAILIA	17.20	4	8	-1	1	3	-2	3.52	2.08	0
580	JEBEL GENETFA	120.00	7	4	1	1	3	-2	2.44	1.42	0
581	SHALLUFA I	10.00	6	4	1	1	3	-1	0.58	0.58	0
582	SHALLUFA II	20.00	7	2	1	1	3	-1	1.54	1.13	0
583	SUEZ	44.00	3	6	-1	1	3	-1	1.48	1.07	0
584	ADABIYA	40.00	8	2	1	1	1	-1	0.63	0.63	1
585	KUNEITRA	8.00	6	6	0	2	3	-1	2.00	2.00	1
586	AHMADIYEH	1.00	3	7	-1	1	3	-1	1.45	0.95	0
587	RAFID	10.00	6	5	1	1	3	-2	1.00	1.00	0
588	YEHUDA-EL AL	0.00	3	7	-1	1	3	-2	0.63	0.63	1

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	WINA	CRIT	PRIA1	PRID1	BATTLE DURATION	SUM ACTIVE TIME	PERIOD CODE
SEQNO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRIA1	PRID1	BATDURN	SUMATP	ATPCODE
589	NAFEKH	0.00	3	7	-1	1	3	-2	1.20	0.72	0
590	TEL FARRIS	12.00	7	3	1	1	3	-2	3.00	3.00	1
591	HUSHNIYAH	5.10	7	3	1	1	3	-2	2.25	1.29	0
592	MOUNT HERMON I	0.00	4	7	-1	1	3	-1	2.00	2.00	1
593	MOUNT HERMON I	0.00	3	8	-1	1	3	-1	1.00	1.00	1
594	TEL SHAMS	6.00	7	5	1	1	3	-2	2.42	0.65	0
595	TEL SHAAR	4.00	7	3	1	1	3	-1	2.00	2.00	1
596	TEL EL HARA	-2.00	1	9	-1	1	3	-1	0.02	0.02	0
597	KFAR SHAMS-TEL ANTAR	5.00	8	2	1	1	1	-1	0.13	0.13	0
598	NABA	0.00	2	8	-1	1	3	-1	0.23	0.19	0
599	ARAB COUNTEROFFENSIVE	0.00	2	8	-1	1	3	-1	0.46	0.46	0
600	MOUNT HERMON II	0.00	3	6	-1	1	3	-1	0.08	0.08	0
601	MOUNT HERMON III	5.00	7	3	1	1	3	-1	1.00	1.00	1
602	SIDI BOU ZID I	16.00	8	3	1	0	2	-2	1.00	1.00	1
603	SIDI BOU ZID II	0.00	2	9	-1	0	3	-2	1.00	1.00	1
604	KASSERINE PASS	3.00	7	3	1	0	3	-1	2.00	2.00	1
605	RAPIDO NORTH I	0.70	2	8	-1	0	3	-2	1.00	1.00	1
606	RAPIDO NORTH II	1.00	2	8	-1	0	3	-2	1.00	1.00	1
607	RAPIDO SOUTH I	0.50	2	8	-1	0	3	-2	1.00	1.00	1
608	RAPIDO SOUTH II	0.80	2	8	-1	0	3	-2	1.00	1.00	1
609	BOWLING ALLEY I	0.75	6	6	-1	0	3	-1	4.00	4.00	1
610	BOWLING ALLEY II	2.00	7	6	1	0	3	-1	2.00	2.00	1
611	BOWLING ALLEY III	0.20	3	6	-1	0	3	-1	4.00	4.00	1
612	MORTAIN I	0.80	3	6	-1	0	3	-1	1.00	1.00	1
613	MORTAIN II	4.00	4	7	-1	0	3	-1	1.00	1.00	1
614	SCHMIDT I	0.85	4	7	-1	0	3	-2	4.00	4.00	1
615	SCHMIDT II	0.15	3	9	-1	0	3	-2	2.00	2.00	1
616	SCHMIDT III	0.50	4	6	-1	0	3	-2	3.00	3.00	1
617	WAHLERSCHIED	1.10	7	4	1	0	3	-1	4.00	4.00	1
618	KRINKELT-ROCHERATH I	5.00	5	4	1	0	3	-1	1.00	1.00	1
619	KRINKELT-ROCHERATH II	0.30	3	7	-1	0	3	-1	3.00	3.00	1
620	SCHNEE EIFEL CENTER	1.00	7	2	1	0	3	-1	4.00	4.00	1
621	SCHNEE EIFEL SOUTH	2.00	6	5	1	0	3	-1	1.00	1.00	1
622	SCHNEE EIFEL NORTH I	4.00	8	2	1	0	3	-2	1.00	1.00	1
623	SCHNEE EIFEL NORTH II	1.50	8	2	1	0	1	-1	4.00	4.00	1
624	OUR RIVER CENTER	3.25	6	5	1	0	3	-1	3.00	3.00	1
625	OUR RIVER NORTH	2.00	6	5	1	0	3	-1	2.00	2.00	1
626	Pusan Perimeter	1.60	0	0	-1	0	3	-9	2.07	1.02	0
627	Pusan Breakout	11.30	0	0	1	0	-9	-9	4.00	4.00	1
628	Nam River	23.00	0	0	1	0	-9	-9	3.00	3.00	1
629	Kunson	292.00	0	0	1	0	-9	-9	6.00	6.00	1
630	Butte Line	3.20	0	0	1	0	3	-9	5.00	5.00	1

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BATTLE SEQ. NO.	BATTLE NAME	ATK KM ADVANCED	ATK ACHIEV	DEF ACHIEV	VICTOR	WIN CRIT	ATK TACTIC	DEF TACTIC	BATTLE DURATION	SUM TIME	ACTIVE PERIOD
SEQNO	NAME	KMDA	ACHA	ACHD	WINA	CRIT	PRI1	PRD1	BATDURN	SUMATP	ATPCODE
631	Han River	12.90	0	0	1	0	5	-9	3.00	3.00	1
632	Chan River	19.30	0	0	1	0	3	-9	3.00	3.00	1
633	Pierce Line	14.50	0	0	1	0	3	-9	4.00	4.00	1
634	Kansas Line	50.00	0	0	1	0	-9	-9	5.00	5.00	1
635	Iron Triangle	1.00	0	0	-1	0	3	-9	2.00	2.00	1
636	Bayonette Line	1.80	0	0	1	0	3	-9	2.00	2.00	1
637	Targul Frumos	-9999.00	0	0	-1	0	3	-9	1.00	1.00	1
638	Mishmar Hayarden 1	-9999.00	0	0	1	0	3	-9	5.00	5.00	1
639	Mishmar Hayarden 2	-9999.00	0	0	-1	0	3	-9	6.00	6.00	1
640	Hiram	-9999.00	0	0	-9	0	3	-9	3.00	3.00	1
641	Banias-Masaada	7.00	0	0	1	0	-9	-9	1.00	1.00	1
642	Boutmiya	21.00	0	0	1	0	-9	-9	1.00	1.00	1
643	Kuneitra	15.00	0	0	1	0	-9	-9	1.00	1.00	1
644	Tarto-Tiber	4.80	0	0	1	0	3	-9	2.00	2.00	1
645	Bekka Valley	36.00	0	0	1	0	3	-9	3.00	3.00	1
646	Acre	-9999.00	0	0	1	0	3	-9	2.00	2.00	1
647	"Death to Invader"	-9999.00	0	0	1	0	3	-9	5.00	5.00	1
648	El Auja "Avin"	-9999.00	0	0	1	0	3	-9	3.00	3.00	1
649	Ageila-Rafah "Avin"	-9999.00	0	0	1	0	3	-9	10.00	10.00	1
650	Abu Agelia-Um Katef	-9999.00	0	0	-1	0	3	-9	3.00	3.00	1
651	Bir Rud Salim	-9999.00	0	0	1	0	3	-9	2.00	2.00	1
652	Rafah-El Arish	26.00	0	0	1	0	3	-9	1.00	1.00	1
653	Gaza-Khan Yunis	30.00	0	0	1	0	3	-9	1.06	0.01	0
654	Quang Tri	-9999.00	0	0	1	0	3	-9	30.00	30.00	1
655	Jerusalem "Jebussi"	-9999.00	0	0	0	0	3	-9	40.00	40.00	1
656	Jerusalem Corridor	-9999.00	0	0	-9	0	3	-9	5.00	5.00	1
657	Ardennes	-9999.00	0	0	1	0	5	-9	12.00	12.00	1
658	Cambrai	48.00	0	0	1	0	3	-9	5.00	5.00	1
659	Arras	-9999.00	0	0	-1	0	1	-9	2.00	2.00	1
660	Boos	0.00	0	0	0	0	3	-9	1.00	1.00	1

DESANTIS

1. Data Source:

- a. Title: Manual War Gaming: An Historical Analysis of Combat Ratio Versus Rate of Advance
- b. Author: de Santis, MAJ Edward
- c. Date: 1972
- d. Organization: Treatise Submitted to the Faculty of the United States Army Command and General Staff College, 1972
- e. Number: NA
- f. Available From: US Army Command and General Staff College Library

2. Data Description:

- a. (p ii, Abstract) "This investigation was conducted to establish a correlation between combat ratio and rates of advance of two opposing forces on a conventional battlefield. The primary purpose of the research was to verify the data presently being used in the Combat Developments Command Manual Quick War Game (JIFFY)."
- b. The source provides data on advances in 84 World War II division operations in the European Theater of Operations. It obtained its data from the US Army in WWII Series (Green Books), supplemented by a few other history books.
- c. Distances are defined as (p 21) "The actual distance of advance of the attacker in each battle analyzed was scaled off the situation map for the corresponding time interval described in the narrative of the battle."
- d. Situational descriptors are defined as follows.
 - (1) Type of Attack. (p 18) Frontal or flank attack by infantry or by mechanized/armored attacks over open, median and close terrain.
 - (2) Open, Median, or Close terrain (see the Data Table Notes, below).
 - (3) Open, Hasty, or Fortified Defense (see the Data Table Notes, below).

3. Discussion and Comments:

- a. The DESANTIS data on rates of advance are highly correlated (i.e., partly redundant), since they are for advances by several of the divisions in a single corps operation. It is doubtful that they should be treated as though they were separate (statistically independent) sample points. Also, some of De Santis' categories contain very few data points, as illustrated below:

<u>Category</u>	<u>Data points</u>
Infantry attacks over open terrain	25
Mechanized attacks over open terrain	11
Infantry attacks over close terrain	10
Infantry attacks over median terrain	17
Mechanized attacks over median terrain	15
<u>Mechanized attacks over close terrain</u>	<u>6</u>
Total	74

b. Most of the data used in this study are for US versus German forces in the European Theater of Operations, nearly all in the October to mid-December 1944 time period. This is a very narrow basis for generalization.

c. These data apply to forces that are heavily engaged.

4. Data Table Notes:

a. Note 1: See source document for definition and procedures for computing firepower ratios.

b. Note 2: (p 17) "Open terrain is flat or slightly rolling, with little vegetation, and has a contour interval variation from 0 to 100 meters per kilometer, permitting maximum cross-country movement. ... Median terrain is rolling terrain, lightly covered with trees and other vegetation with a contour interval variation of 100 to 200 meters per kilometer produced by small hills with gentle slopes causing a slight reduction of cross-country movement. ... Close terrain is rough, heavily wooded terrain with a contour interval variation of 200 to 400 meters per kilometer or more. This variation is considered sufficient to cause significant slowing of cross-country movement."

c. Note 3: (pp 16/17). "An open defensive posture is one in which the defender has not had time to prepare field fortifications of any type and is using only the natural cover and concealment afforded by the terrain. ... A hasty defensive posture is one in which basic field fortifications, obstacles, and minefields have been constructed, normally in less than a 24-hour time period. ... A fortified defensive posture is one in which basic field fortifications have been improved with revetments, overhead cover, additional minefields and other obstacles, and the time of preparation of the position has been in excess of 24 hours."

PART 1 OF 4

DESANTIS

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (METERS)	DISTANCE (KM)	TIME (HRS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	FIREPOWER RATIO	MODE OF MOVEMENT
1	V Corps Advance	US 2nd Inf Div	1,900	1.90	15	0.63	3.04	13-Jun-44	13-Jun-44	1.53	Foot
2	Approaches to Duren	US 9th Inf Div	5,000	5.00	33	1.38	3.64	NA	NA	1.56	Foot
3	Advance	US 26th Inf Div	1,290	1.29	10	0.42	3.10	09-Nov-44	09-Nov-44	1.61	Foot
4	Advance	US 26th Inf Div	1,690	1.69	13	0.54	3.12	08-Nov-44	08-Nov-44	1.61	Foot
5	Approaches to Duren	US 104th Inf Div	3,800	3.80	35	1.46	2.61	NA	NA	1.66	Foot
6	V Corps Advance	US 29th Inf Div	1,150	1.15	10	0.42	2.76	13-Jun-44	13-Jun-44	1.78	Foot
7	Advance North	US 4th Inf Div	2,480	2.48	12	0.50	4.96	21-Jun-44	21-Jun-44	1.97	Foot
8	XII Corps	US 80th Inf Div	2,700	2.70	14	0.58	4.63	08-Oct-44	08-Oct-44	2.19	Foot
9	Advance North	US 79th Inf Div	7,450	7.45	24	1.00	7.45	19-Jun-44	19-Jun-44	1.30	Foot
10	Toward St. Lo	US 29th Inf Div	2,400	2.40	10	0.42	5.76	15-Jun-44	15-Jun-44	2.40	Foot
11	XII Corps	US 35th Inf Div	3,800	3.80	16	0.67	5.70	08-Oct-44	08-Oct-44	2.47	Foot
12	Advance North	US 4th Inf Div	6,170	6.17	18	0.75	8.23	19-Jun-44	19-Jun-44	3.10	Foot
13	Ardennes	Ger 3rd Parachute Div	2,700	2.70	9	0.38	7.20	16-Dec-44	16-Dec-44	3.10	Foot
14	Schnee Eiffel	Ger 62nd Volksgrenadier Div	3,520	3.52	10	0.42	8.45	16-Dec-44	16-Dec-44	1.56	Foot
15	Advance on Left	US 90th Inf Div	5,460	5.46	15	0.63	8.74	07-Sep-44	07-Sep-44	2.40	Foot
16	Advance North	US 79th Inf Div	1,950	1.95	18	0.75	10.60	20-Jun-44	20-Jun-44	2.54	Foot
17	Advance on Left	US 90th Inf Div	5,300	5.30	12	0.50	10.60	09-Sep-44	09-Sep-44	2.64	Foot
18	Advance on Left	US 90th Inf Div	3,980	3.98	10	0.42	9.55	10-Sep-44	10-Sep-44	2.71	Foot
19	Northern Shoulder	Ger Atk in US 2nd & 99th Inf Div Sector	9,680	9.68	20	0.83	11.62	17-Dec-44	17-Dec-44	1.85	Motor
20	V Corps Advance	US 29th Inf Div	6,500	6.50	15.5	0.65	10.06	09-Jun-44	10-Jun-44	2.78	Foot
21	Advance North	US 4th Inf Div	10,600	10.60	15	0.63	16.96	20-Jun-44	20-Jun-44	3.94	Foot
22	V Corps Advance	US 1st Inf Div	7,500	7.50	10	0.42	18.00	12-Jun-44	12-Jun-44	4.15	Foot
23	Southern Shoulder	Ger 212th Volksgrenadier Div	11,440	11.44	14	0.58	19.61	16-Dec-44	16-Dec-44	5.22	Foot
24	Advance North	US 9th Inf Div	7,050	7.05	7	0.29	24.17	20-Jun-44	20-Jun-44	5.00	Foot
25	Advance North	US 9th Inf Div	17,600	17.60	15	0.62	28.20	19-Jun-44	19-Jun-44	5.62	Foot
26	Toward St. Lo	US 2nd Inf Div	555	0.56	9	0.38	1.48	15-Jun-44	15-Jun-44	1.10	Foot
27	V Corps Advance	US 29th Inf Div	1,500	1.50	18	0.75	2.00	12-Jun-44	12-Jun-44	1.46	Foot
28	Schmidt I	US 9th Inf Div	3,800	3.80	40.5	1.69	2.25	06-Oct-44	10-Oct-44	1.71	Foot
29	Hurtgen Forest	US 1st Inf Div	3,000	3.00	22	0.92	3.27	16-Nov-44	19-Nov-44	1.84	Foot
30	Advance	US 35th Inf Div	2,000	2.00	14	0.58	3.43	08-Nov-44	17-Nov-44	1.31	Foot
31	Advance	US 35th Inf Div	1,975	1.98	13	0.54	3.65	08-Nov-44	08-Nov-44	1.43	Foot
32	Advance	US 26th Inf Div	1,760	1.76	11	0.46	3.84	19-Nov-44	19-Nov-44	1.48	Foot
33	Advance	US 26th Inf Div	2,460	2.46	15	0.63	3.94	18-Nov-44	18-Nov-44	1.51	Foot
34	Advance	US 80th Inf Div	1,635	1.64	10	0.42	3.92	08-Nov-44	08-Nov-44	1.68	Foot
35	Advance	US 80th Inf Div	2,550	2.55	14	0.58	4.37	10-Nov-44	10-Nov-44	1.78	Foot
36	XIX Corps	US 30th Inf Div	1,650	1.65	9	0.38	4.40	02-Oct-44	02-Oct-44	2.84	Foot
37	Advance	US 80th Inf Div	3,540	3.54	17	0.71	5.00	09-Nov-44	09-Nov-44	2.07	Foot
38	Hurtgen Forest	US 30th Inf Div	7,100	7.10	31	1.29	5.50	NA	NA	1.11	Foot
39	XII Corps	US 80th Inf Div	2,950	2.95	10	0.42	7.08	09-Oct-44	09-Oct-44	3.81	Foot
40	Advance	US 26th Inf Div	5,280	5.28	16	0.67	7.92	21-Nov-44	21-Nov-44	3.20	Foot
41	XIX Corps	US 30th Inf Div	3,500	3.50	10	0.42	8.40	02-Oct-44	02-Oct-44	4.65	Foot
42	Advance	US 26th Inf Div	4,600	4.60	11	0.46	10.04	22-Nov-44	22-Nov-44	3.88	Foot
43	V Corps Advance	US 2nd Inf Div	1,250	1.25	21	0.88	1.43	10-Jun-44	10-Jun-44	1.03	Foot
44	Advance	US 35th Inf Div	1,230	1.23	22	0.92	1.34	09-Nov-44	09-Nov-44	1.33	Foot
45	Foret de Gremecy	Ger Atk in US 35th Inf Div Sector	1,820	1.82	22	0.92	1.99	28-Sep-44	29-Sep-44	2.02	Motor

DESANTIS

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (METERS)	DISTANCE (KM)	TIME (HRS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	FIREPOWER RATIO	MODE OF MOVEMENT
46	V Corps Advance	US 1st Inf Div	550	0.55	5	0.21	2.64	13-Jun-44	13-Jun-44	3.10	Foot
47	V Corps Advance	US 2nd Inf Div	1,600	1.60	13	0.54	2.95	09-Jun-44	09-Jun-44	3.52	Foot
48	Advance	US 26th Inf Div	2,460	2.46	17	0.71	3.47	24-Nov-44	24-Nov-44	3.98	Foot
49	Advance	US 26th Inf Div	2,450	2.45	16	0.67	3.68	25-Nov-44	25-Nov-44	4.05	Foot
50	XIX Corps	US 30th Inf Div	1,880	1.88	11	0.46	4.10	03-Oct-44	03-Oct-44	4.37	Foot
51	Ardennes	Ger 18th Volksgrenadier Div	3,500	3.50	11	0.46	7.64	16-Dec-44	16-Dec-44	8.94	Foot
52	Ardennes	Ger 18th Volksgrenadier Div	3,870	3.87	10	0.42	9.29	15-Dec-44	16-Dec-44	9.05	Foot
53	Drive to Roer R.	US 2nd Armd Div	2,400	2.40	14	0.58	4.11	27-Nov-44	27-Nov-44	1.80	Motor
54	Attack	US 4th Armd Div	3,520	3.52	14	0.58	6.03	12-Nov-44	12-Nov-44	1.07	Motor
55	LVIII Panzer Corps	Ger 11th Panzer Div	3,900	3.90	15	0.63	6.24	25-Sep-44	25-Sep-44	1.09	Motor
56	Advance	US 4th Armd Div	7,050	7.05	15	0.63	11.28	09-Nov-44	09-Nov-44	1.52	Motor
57	Advance	US 4th Armd Div	3,970	3.97	9	0.38	10.59	13-Nov-44	13-Nov-44	1.52	Motor
58	LVIII Panzer Corps	Ger 113th Panzer Bde	2,370	2.37	6	0.25	9.48	19-Sep-44	19-Sep-44	1.54	Motor
59	Across the Moselle	Ger 25th Panzer Grenadier Rgt	5,500	5.50	12	0.50	11.00	12-Nov-44	12-Nov-44	1.60	Motor
60	Attack Thru 26th ID	US 4th Armd Div	4,580	4.58	7	0.29	15.70	10-Nov-44	10-Nov-44	2.26	Motor
61	Advance	US 4th Armd Div	8,970	8.97	11	0.46	19.57	12-Nov-44	12-Nov-44	2.41	Motor
62	Northern Shoulder	Ger Atk in US 2nd & 99th Inf Div Sector	10,200	10.20	11	0.46	22.25	17-Dec-44	18-Dec-44	1.85	Motor
63	Advance	US 4th Armd Div	8,300	8.30	8	0.33	24.90	11-Nov-44	11-Nov-44	4.62	Motor
64	Approaches to Duren	US 5th Armd Div	4,000	4.00	24	1.00	4.00	10-Dec-44	10-Dec-44	2.22	Motor
65	XIX Corps	US 2nd Armd Div	800	0.80	4	0.17	4.80	02-Oct-44	02-Oct-44	2.48	Motor
66	XIX Corps	US 2nd Armd Div	1,750	1.75	8	0.33	5.25	03-Oct-44	03-Oct-44	2.62	Motor
67	Foret de Gremecy	Ger 106th Panzer Bde	2,800	2.80	13	0.54	5.17	30-Sep-44	30-Sep-44	2.65	Motor
68	Advance	US 4th Armd Div	2,110	2.11	10	0.42	5.06	14-Nov-44	14-Nov-44	1.66	Motor
69	Advance	US 6th Armd Div	5,280	5.28	16	0.67	7.92	11-Nov-44	11-Nov-44	2.80	Motor
70	Advance	US 6th Armd Div	3,880	3.88	11	0.46	8.47	13-Nov-44	13-Nov-44	2.92	Motor
71	XIX Corps	US 2nd Armd Div	1,900	1.90	5	0.21	9.12	04-Oct-44	04-Oct-44	4.22	Motor
72	Advance	US 6th Armd Div	3,160	3.16	8	0.33	9.48	12-Nov-44	12-Nov-44	3.32	Motor
73	Ardennes	Ger 2nd Panzer Div	4,050	4.05	10	0.42	9.72	16-Dec-44	16-Dec-44	4.35	Motor
74	XII Corps	US 6th Armd Div	2,800	2.80	4	0.17	16.80	09-Oct-44	09-Oct-44	7.25	Motor
75	XII Corps	US 6th Armd Div	5,000	5.00	6	0.25	20.00	08-Oct-44	08-Oct-44	8.64	Motor
76	Ardennes	Ger 2nd Panzer Div	4,100	4.10	9	0.38	10.93	17-Dec-44	17-Dec-44	4.57	Motor
77	Ardennes	Ger 2nd Panzer Div	5,000	5.00	11	0.46	10.91	18-Dec-44	18-Dec-44	4.53	Motor
78	Ardennes	Ger 2nd Panzer Div	4,500	4.50	9	0.38	12.00	19-Dec-44	19-Dec-44	5.00	Motor
79	XIX Corps	US 2nd Armd Div	1,200	1.20	10	0.42	2.88	05-Oct-44	05-Oct-44	2.80	Motor
80	Ardennes	Ger 116th Panzer Div	3,100	3.10	19	0.79	3.92	16-Dec-44	16-Dec-44	3.80	Motor
81	XIX Corps	US 2nd Armd Div	1,880	1.88	10	0.42	4.51	03-Oct-44	03-Oct-44	4.37	Motor
82	XIX Corps	US 2nd Armd Div	2,200	2.20	8	0.33	6.60	06-Oct-44	06-Oct-44	5.68	Motor
83	Hurtgen Forest	US 3rd Armd Div	3,300	3.30	10	0.42	7.92	17-Nov-44	17-Nov-44	6.80	Motor
84	Ardennes	Ger 116th Panzer Div	7,500	7.50	20	0.83	9.00	17-Dec-44	17-Dec-44	7.34	Motor

PART 3 OF 4

DESANTIS

NO.	OPERATION NAME/PHASE	TYPE ATTACK	TERRAIN	TYPE DEFENSE	FORCE SIZE	COMMENT'S
1	V Corps Advance	Frontal	Open	Hasty Div		
2	Approaches to Duren	Frontal	Open	Fortified Div		+ Elements 3rd Armd Div
3	Advance	Frontal	Open	Hasty Div		w/ Armor attached
4	Advance	Frontal	Open	Hasty Div		w/ Armor attached
5	Approaches to Duren	Frontal	Open	Fortified Div		
6	V Corps Advance	Frontal	Open	Hasty Bde		
7	Advance North	Frontal	Open	Fortified Div		
8	XII Corps	Frontal	Open	Fortified Div		
9	Advance North	Frontal	Open	Open Bde		
10	Toward St. Lo	Frontal	Open	Hasty Div		
11	XII Corps	Frontal	Open	Fortified Div		
12	Advance North	Frontal	Open	Fortified Div		
13	Ardennes	Frontal	Open	Fortified Div		
14	Schnee Eiffel	Flank	Open	Fortified Div		
15	Advance on Left	Frontal	Open	Open Bde		
16	Advance North	Frontal	Open	Open Div		
17	Advance on Left	Frontal	Open	Open Div		
18	Advance on Left	Frontal	Open	Open Div		
19	Northern Shoulder	Flank	Open	Open Corps		
20	V Corps Advance	Frontal	Open	Open Div		
21	Advance North	Frontal	Open	Open Div		
22	V Corps Advance	Frontal	Open	Open Div		
23	Southern Shoulder	Frontal	Open	Fortified Div		
24	Advance North	Frontal	Open	Open Div		
25	Advance North	Frontal	Open	Open Div		
26	Toward St. Lo	Frontal	Median	Hasty Div		
27	V Corps Advance	Frontal	Median	Hasty Div		
28	Schmidt I	Frontal	Median	Fortified Div		+2 Med Tk Cos
29	Hurtgen Forest	Frontal	Median	Fortified Div		+ 1 Inf Rgt
30	Advance	Frontal	Median	Open Div		+ 2 Med Tk Cos
31	Advance	Frontal	Median	Open Div		+ 2 Tk Bns
32	Advance	Frontal	Median	Open Div		+ 2 Tk Bns
33	Advance	Frontal	Median	Open Div		+ 2 Tk Bns
34	Advance	Frontal	Median	Open Div		+ 1 Tk Bn & 1 Tk Dstr Bn
35	Advance	Frontal	Median	Open Div		+ 1 Med Tk Bn & 1 Tk Dstr Bn
36	XIX Corps	Frontal	Median	Fortified Div		Strong Arty support to Atk
37	Advance	Frontal	Median	Open Div		+ 1 Med Tk Bn & 1 Tk Dstr Bn
38	Hurtgen Forest	Flank	Median	Hasty Div		+ 3 Tk Bns
39	XII Corps	Frontal	Median	Fortified Div		
40	Advance	Frontal	Median	Open Div		+ 2 Tk Bns
41	XIX Corps	Frontal	Median	Fortified Div		+ 2 Med Tk Cos & 1 Tk Dstr Bn
42	Advance	Frontal	Median	Open Div		+ 2 Tk Bns
43	V Corps Advance	Frontal	Close	Fortified Bde		
44	Advance	Frontal	Close	Fortified Rgt		+ 1 Med Tk Co
45	Foret de Gremecy	Frontal	Close	Hasty Corps		

DESANTIS

NO.	OPERATION NAME/PHASE	TYPE ATTACK	TERRAIN	TYPE DEFENSE	FORCE SIZE	COMMENTS
46	V Corps Advance	Frontal	Close	Fortified Div		
47	V Corps Advance	Frontal	Close	Fortified Bde		+ 2 Tk Bns
48	Advance	Frontal	Close	Fortified Div		+ 2 Tk Bns
49	Advance	Frontal	Close	Fortified Div		+ Combat Command B, 2d Armd Div
50	XIX Corps	Frontal	Close	Fortified Div		
51	Ardennes	Frontal	Close	Hasty Div		
52	Ardennes	Frontal	Close	Fortified Div		
53	Drive to Roer R.	Frontal	Open	Hasty Div		+ 2 Inf Bns
54	Attack	Frontal	Open	Open Rgt		Combat Command B
55	LVIII Panzer Corps	Frontal	Open	Open Div		
56	Advance	Frontal	Open	Open Bde		Combat Command A
57	Advance	Frontal	Open	Open Bde		Combat Command A + 1 Inf Bn
58	LVIII Panzer Corps	Frontal	Open	Open Rgt		
59	Across the Moselle	Frontal	Open	Open Div		+1 Med Tk Co
60	Attack Thru 26th ID	Frontal	Open	Open Bde		Combat Command B + 1 Inf Bn
61	Advance	Frontal	Open	Open Corps		
62	Northern Shoulder	Flank	Open	Open Bde		Combat Command B
63	Advance	Frontal	Open	Hasty Bde		CCA, CCB, & CCR
64	Approaches to Duren	Frontal	Median	Fortified Div		
65	XIX Corps	Frontal	Median	Fortified Rgt		
66	XIX Corps	Frontal	Median	Fortified Rgt		
67	Forêt de Gremey	Frontal	Median	Hasty Div		+ 1 Volksgrenadier Rgt
68	Advance	Frontal	Median	Open Bde		Combat Command A + 1 Inf Bn
69	Advance	Frontal	Median	Open Div		CCA & CCB
70	Advance	Frontal	Median	Open Div		Division Reinf.
71	XIX Corps	Frontal	Median	Fortified Bde		CCA
72	Advance	Frontal	Median	Open Div		CCA & CCB
73	Ardennes	Frontal	Median	Hasty Div		
74	XII Corps	Frontal	Median	Hasty Bde		Combat Command A
75	XII Corps	Frontal	Median	Fortified Div		
76	Ardennes	Frontal	Median	Hasty Div		
77	Ardennes	Frontal	Median	Hasty Div		
78	Ardennes	Frontal	Median	Hasty Div		
79	XIX Corps	Frontal	Close	Hasty Rgt		
80	Ardennes	Frontal	Close	Hasty Div		
81	XIX Corps	Frontal	Close	Fortified Div		+ 30th Inf Div
82	XIX Corps	Frontal	Close	Hasty Bde		Combat Command A
83	Hurtgen Forest	Frontal	Close	Hasty Bde		Combat Command B
84	Ardennes	Frontal	Close	Hasty Div		

EASTFRON

1. Data Source:

- a. Title: Great Battles on the Eastern Front: The Soviet-German War, 1941-1945
- b. Author: Dupuy, Trevor N. and Paul Martell
- c. Date: 1982
- d. Organization: The Bobbs-Merrill Company, Indianapolis
- e. Number: NA
- f. Available from: Libraries

2. Data Description:

a. The EASTFRON data are taken from the tables on pages 45, 58, 89, 128, 148, 163, 182, 191, 203, 217, and 246 of the source.

b. The source states that its information is (p 5) "based primarily on materials in various issues of the Soviet monthly magazine *Military-Historical Journal*". But it is hard to tell exactly what the qualifier "primarily" signifies. For example, although the source briefly alludes (p 2) to some German strength and loss data "taken by the Soviet authors from the German records captured by either by the Red Army or by US forces. the latter available on microfilm at the US National Archives," no other references, bibliographies, or literature citations are offered. None of the source's data are attributed to any *other* source. The source also states (pp 1-2, *passim*) that since "Soviet archives are closed to Western researchers," "it takes an enormous effort to collect Soviet data from the various and numerous sources in Russian open literature and to glean hard data from the propaganda and the unidentified estimates that typically accompany it."

c. Most of the source's data tables provide the distance advanced by a unit and its starting and ending dates. They do not provide explicit information on the intensity of the engagement or the governing mode of movement, topography, vegetation, or footing. Force sizes are implicit in the unit designation. Occasionally orders of battle and unit strengths are given elsewhere in the source. Where a range of values is given for the distances or rates of advance—as in the tables on pages 89 (Kursk), 148 (Crimean Operation), 182 (Lvov-Sandomierz), 203 (East Prussia), 217 (Vistula-Oder), and 246 (Manchuria)—we adopted a "middling" or nominal value computed as the average of the high and low ends of the range given.

d. The EASTFRON data base includes a total of 212 values for the rates of advance gleaned from the following operations: Defense of Moscow, Soviet Counteroffensive, Citadel (Kursk), Melitopol Breakthrough, Melitopol Pursuit, Crimean Operation, Byelorussian Offensive, Lvov-Sandomierz Offensive, Yassy-Kishinev Operation, Battle for East Prussia, Vistula-Oder Offensive, and the Manchurian Campaign.

3. Discussion and Comments:

a. The data do not include any cases of Soviet retreats or withdrawals—only successful Soviet advances are reported.

b. Some portions of these data can be compared data on Soviet advances given elsewhere. See, for example, portions of the data bases CDB90, GLANTZ, ORALFORE, PADZIEV, RECORD, SAVKIN, and ROWLAND. See also HERO Combat Data Subscription Service (Volume I, No. 1, 1975; Volume II, No. 1, Winter 1976; Volume II, No. 3, 1977; and Volume II, No. 4, 1978). See also Losik, O. A. (ed.), "Organization and Tactical Employment of Soviet Tank Forces During the Great Patriotic War," Military Publishing House, Ministry of Defense, USSR, Moscow, 1979.

4. Data Table Notes: None

EASTFRONT

PART 1 OF 10

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	Defense of Moscow	9th Field Army	N/U	140	N/U	14	10.00	02-Oct-41	15-Oct-41			
2	Defense of Moscow	9th Field Army	N/U	80	N/U	15	5.33	16-Oct-41	30-Oct-41			
3	Defense of Moscow	3rd Panzer Group	N/U	120	N/U	9	13.33	02-Oct-41	10-Oct-41			
4	Defense of Moscow	3rd Panzer Group	N/U	150	N/U	5	30.00	11-Oct-41	15-Oct-41			
5	Defense of Moscow	3rd Panzer Group	N/U	90	N/U	14	6.43	16-Nov-41	29-Nov-41			
6	Defense of Moscow	4th Field Army	N/U	200	N/U	14	14.29	02-Oct-41	15-Oct-41			
7	Defense of Moscow	4th Field Army	N/U	60	N/U	15	4.00	16-Oct-41	30-Oct-41			
8	Defense of Moscow	4th Panzer Group	N/U	120	N/U	4	30.00	02-Oct-41	05-Oct-41			
9	Defense of Moscow	4th Panzer Group	N/U	120	N/U	10	12.00	06-Oct-41	15-Oct-41			
10	Defense of Moscow	4th Panzer Group	N/U	30	N/U	10	3.00	17-Oct-41	26-Oct-41			
11	Defense of Moscow	4th Panzer Group	N/U	60	N/U	13	4.62	16-Nov-41	28-Nov-41			
12	Defense of Moscow	2nd Field Army	N/U	180	N/U	16	11.25	30-Sep-41	15-Oct-41			
13	Defense of Moscow	2nd Field Army	N/U	80	N/U	15	5.33	16-Oct-41	30-Oct-41			
14	Defense of Moscow	2nd Field Army	N/U	90	N/U	20	4.50	16-Nov-41	05-Dec-41			
15	Defense of Moscow	2nd Panzer Group	N/U	180	N/U	3	60.00	30-Sep-41	02-Oct-41			
16	Defense of Moscow	2nd Panzer Group	N/U	20	N/U	3	6.67	03-Oct-41	05-Oct-41			
17	Defense of Moscow	2nd Panzer Group	N/U	120	N/U	15	8.00	16-Oct-41	30-Oct-41			
18	Defense of Moscow	2nd Panzer Group	N/U	90	N/U	18	5.00	18-Nov-41	05-Dec-41			
19	Soviet Counteroffensive	Kalinin Army Group	N/U	12	N/U	12	1.00	05-Dec-41	16-Dec-41			
20	Soviet Counteroffensive	Kalinin Army Group	N/U	45	N/U	9	5.00	17-Dec-41	25-Dec-41			
21	Soviet Counteroffensive	Kalinin Army Group	N/U	45	N/U	14	3.21	26-Dec-41	08-Jan-42			
22	Soviet Counteroffensive	Western Army Grp Right Wing	N/U	65	N/U	11	5.91	06-Dec-41	16-Dec-41			
23	Soviet Counteroffensive	Western Army Grp Right Wing	N/U	45	N/U	9	5.00	17-Dec-41	26-Dec-41			
24	Soviet Counteroffensive	Western Army Grp Left Wing	N/U	100	N/U	11	9.09	06-Dec-41	16-Dec-41			
25	Soviet Counteroffensive	Western Army Grp Left Wing	N/U	90	N/U	8	11.25	17-Dec-41	24-Dec-41			
26	Soviet Counteroffensive	Western Army Grp Left Wing	N/U	110	N/U	15	7.33	25-Dec-41	08-Jan-42			
27	Soviet Counteroffensive	Western Army Grp Center	N/U	20	N/U	7	2.86	18-Dec-41	24-Dec-41			
28	Soviet Counteroffensive	Western Army Grp Center	N/U	40	N/U	15	2.67	25-Dec-41	08-Jan-42			
29	Soviet Counteroffensive	Southwest Army Grp Rt Wing	N/U	60	N/U	11	5.45	06-Dec-41	16-Dec-41			
30	Soviet Counteroffensive	Southwest Army Grp Rt Wing	N/U	25	N/U	8	3.13	17-Dec-41	24-Dec-41			
31	Soviet Counteroffensive	Southwest Army Grp Rt Wing	N/U	25	N/U	15	1.67	25-Dec-41	08-Jan-42			
32	Citadel (Kursk)	Central Army Grp Sector	N/U	4.5	N/U	1	4.50	05-Jul-43	05-Jul-43			
33	Citadel (Kursk)	Central Army Grp Sector	N/U	3.5	N/U	1	3.50	06-Jul-43	06-Jul-43			
34	Citadel (Kursk)	Central Army Grp Sector	N/U	1.5	N/U	1	1.50	07-Jul-43	07-Jul-43			
35	Citadel (Kursk)	Central Army Grp Sector	N/U	0.5	N/U	1	0.75	08-Jul-43	08-Jul-43			
36	Citadel (Kursk)	Central Army Grp Sector	N/U	0.4	N/U	1	0.40	09-Jul-43	09-Jul-43			
37	Citadel (Kursk)	Voronezh Army Grp Sector	N/U	8	N/U	1	8.00	05-Jul-43	05-Jul-43			
38	Citadel (Kursk)	Voronezh Army Grp Sector	N/U	5.5	N/U	1	5.50	06-Jul-43	06-Jul-43			
39	Citadel (Kursk)	Voronezh Army Grp Sector	N/U	4	N/U	1	6.00	07-Jul-43	07-Jul-43			
40	Citadel (Kursk)	Voronezh Army Grp Sector	N/U	4	N/U	1	4.00	08-Jul-43	08-Jul-43			
41	Citadel (Kursk)	Voronezh Army Grp Sector	N/U	1.5	N/U	1	1.50	09-Jul-43	09-Jul-43			
42	Citadel (Kursk)	Voronezh Army Grp Sector	N/U	2	N/U	1	2.00	10-Jul-43	10-Jul-43			
43	Citadel (Kursk)	Voronezh Army Grp Sector	N/U	2.5	N/U	1	2.50	11-Jul-43	11-Jul-43			
44	Citadel (Kursk)	Voronezh Army Grp Sector	N/U	0	N/U	1	0.00	12-Jul-43	12-Jul-43			
45	Melitopol Breakthrough	3rd Guards Army	N/U	5	N/U	6	0.83	26-Sep-43	01-Oct-43			

EASTFRONT

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
46	Melitopol Breakthrough	5th Strike Army	N/U	12	N/U	31	0.39	26-Sep-43	26-Oct-43			
47	Melitopol Breakthrough	44th Comb Arms Army	N/U	18	N/U	31	0.58	26-Sep-43	26-Oct-43			
48	Melitopol Breakthrough	2nd Guards Army	N/U	17	N/U	31	0.55	26-Sep-43	26-Oct-43			
49	Melitopol Breakthrough	28th Comb Arms Army	N/U	17	N/U	30	0.57	27-Sep-43	26-Oct-43			
50	Melitopol Breakthrough	51st Comb Arms Army	N/U	42	N/U	14	3.00	13-Oct-43	26-Oct-43			
51	Melitopol Pursuit	3rd Guards Army	N/U	65	N/U	5	13.00	27-Oct-43	31-Oct-43			
52	Melitopol Pursuit	5th Strike Army	N/U	130	N/U	6	21.67	27-Oct-43	01-Nov-43			
53	Melitopol Pursuit	2nd Guards Army	N/U	303	N/U	10	30.30	27-Oct-43	05-Nov-43			
54	Melitopol Pursuit	28th Comb Arms Army	N/U	95	N/U	6	15.83	27-Oct-43	01-Nov-43			
55	Melitopol Pursuit	51st Comb Arms Army	N/U	130	N/U	6	21.67	27-Oct-43	01-Nov-43			
56	Melitopol Pursuit	Mecz Cav Groups	N/U	250	N/U	7	35.71	30-Oct-43	05-Nov-43			
57	Crimean Operation	4th Ukrainian Army Grp	N/U	200	N/U	35	5.71	08-Apr-44	12-May-44			
58	Crimean Operation	Indep. Maritime Army	N/U	260	N/U	35	7.43	08-Apr-44	12-May-44			
59	Byelorussian Offensive	1st Baltic Army Grp	N/U	80	N/U	6	13.33	23-Jun-44	28-Jun-44			
60	Byelorussian Offensive	1st Baltic Army Grp	N/U	120	N/U	6	20.00	29-Jun-44	04-Jul-44			
61	Byelorussian Offensive	1st Baltic Army Grp	N/U	120	N/U	12	10.00	05-Jul-44	16-Jul-44			
62	Byelorussian Offensive	1st Baltic Army Grp	N/U	190	N/U	15	12.67	17-Jul-44	31-Jul-44			
63	Byelorussian Offensive	1st Baltic Army Grp	N/U	30	N/U	28	1.07	01-Aug-44	28-Aug-44			
64	Byelorussian Offensive	3rd Byelorussian Army Grp	N/U	130	N/U	6	21.67	23-Jun-44	28-Jun-44			
65	Byelorussian Offensive	3rd Byelorussian Army Grp	N/U	130	N/U	6	21.67	29-Jun-44	04-Jul-44			
66	Byelorussian Offensive	3rd Byelorussian Army Grp	N/U	190	N/U	12	15.83	05-Jul-44	16-Jul-44			
67	Byelorussian Offensive	3rd Byelorussian Army Grp	N/U	60	N/U	15	4.00	17-Jul-44	31-Jul-44			
68	Byelorussian Offensive	3rd Byelorussian Army Grp	N/U	40	N/U	28	1.43	01-Aug-44	28-Aug-44			
69	Byelorussian Offensive	3rd Byelorussian Army Grp	N/U	80	N/U	6	13.33	23-Jun-44	28-Jun-44			
70	Byelorussian Offensive	2nd Byelorussian Army Grp	N/U	110	N/U	6	18.33	29-Jun-44	04-Jul-44			
71	Byelorussian Offensive	2nd Byelorussian Army Grp	N/U	200	N/U	12	16.67	05-Jul-44	16-Jul-44			
72	Byelorussian Offensive	2nd Byelorussian Army Grp	N/U	90	N/U	15	6.00	17-Jul-44	31-Jul-44			
73	Byelorussian Offensive	2nd Byelorussian Army Grp	N/U	90	N/U	28	3.21	01-Aug-44	28-Aug-44			
74	Byelorussian Offensive	1st Byelorussian Army Grp	N/U	110	N/U	6	18.33	23-Jun-44	28-Jun-44			
75	Byelorussian Offensive	1st Byelorussian Army Grp	N/U	100	N/U	6	16.67	29-Jun-44	04-Jul-44			
76	Byelorussian Offensive	1st Byelorussian Army Grp	N/U	170	N/U	12	14.17	05-Jul-44	16-Jul-44			
77	Byelorussian Offensive	1st Byelorussian Army Grp	N/U	110	N/U	15	7.33	17-Jul-44	31-Jul-44			
78	Byelorussian Offensive	1st Byelorussian Army Grp	N/U	100	N/U	28	3.57	01-Aug-44	28-Aug-44			
79	Byelorussian Offensive	1st Byelorussian Army Grp	N/U	230	N/U	11	20.91	18-Jul-44	28-Jul-44			
80	Lvov-Sandomierz Offensive	3rd Guards Comb Arms Army	N/U	45	N/U	6	7.50	13-Jul-44	18-Jul-44			
81	Lvov-Sandomierz Offensive	3rd Guards Comb Arms Army	N/U	158	N/U	9	17.56	19-Jul-44	27-Jul-44			
82	Lvov-Sandomierz Offensive	3rd Guards Comb Arms Army	N/U	33	N/U	6	5.50	29-Jul-44	03-Aug-44			
83	Lvov-Sandomierz Offensive	3rd Guards Comb Arms Army	N/U	26	N/U	26	1.00	04-Aug-44	29-Aug-44			
84	Lvov-Sandomierz Offensive	13th Comb Arms Army	N/U	60	N/U	6	10.00	13-Jul-44	18-Jul-44			
85	Lvov-Sandomierz Offensive	13th Comb Arms Army	N/U	195	N/U	9	21.67	19-Jul-44	27-Jul-44			
86	Lvov-Sandomierz Offensive	13th Comb Arms Army	N/U	63	N/U	6	10.50	29-Jul-44	03-Aug-44			
87	Lvov-Sandomierz Offensive	13th Comb Arms Army	N/U	26	N/U	26	1.00	04-Aug-44	29-Aug-44			
88	Lvov-Sandomierz Offensive	60th Comb Arms Army	N/U	45	N/U	6	7.50	13-Jul-44	18-Jul-44			
89	Lvov-Sandomierz Offensive	60th Comb Arms Army	N/U	75	N/U	9	8.33	19-Jul-44	27-Jul-44			
90	Lvov-Sandomierz Offensive	60th Comb Arms Army	N/U	160	N/U	13	12.31	29-Jul-44	10-Aug-44			

PART 3 OF 10

EASTFRONT

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N MODE OF INTENS MOVEMENT	TOPOGRAPHY
91	Lvov-Sandomierz Offense	60th Comb Arms Army	N/U	23	N/U	19	1.21	11-Aug-44	29-Aug-44		
92	Lvov-Sandomierz Offense	38th Comb Arms Army	N/U	15	N/U	6	2.50	13-Jul-44	18-Jul-44		
93	Lvov-Sandomierz Offense	38th Comb Arms Army	N/U	85	N/U	9	9.44	19-Jul-44	27-Jul-44		
94	Lvov-Sandomierz Offense	38th Comb Arms Army	N/U	70	N/U	6	11.67	29-Jul-44	03-Aug-44		
95	Lvov-Sandomierz Offense	38th Comb Arms Army	N/U	26	N/U	26	1.00	04-Aug-44	29-Aug-44		
96	Lvov-Sandomierz Offense	1st Guards Comb Arms Army	N/U	95	N/U	9	10.56	19-Jul-44	27-Jul-44		
97	Lvov-Sandomierz Offense	1st Guards Comb Arms Army	N/U	13	N/U	6	2.17	29-Jul-44	03-Aug-44		
98	Lvov-Sandomierz Offense	18th Comb Arms Army	N/U	108	N/U	9	12.00	19-Jul-44	27-Jul-44		
99	Lvov-Sandomierz Offense	18th Comb Arms Army	N/U	14	N/U	6	2.33	29-Jul-44	03-Aug-44		
100	Lvov-Sandomierz Offense	5th Guards Comb Arms Army	N/U	60	N/U	7	8.57	04-Aug-44	10-Aug-44		
101	Lvov-Sandomierz Offense	1st Guards Tank Army	N/U	380	N/U	9	42.22	19-Jul-44	27-Jul-44		
102	Lvov-Sandomierz Offense	1st Guards Tank Army	N/U	63	N/U	6	10.50	29-Jul-44	03-Aug-44		
103	Lvov-Sandomierz Offense	1st Guards Tank Army	N/U	39	N/U	26	1.50	04-Aug-44	29-Aug-44		
104	Lvov-Sandomierz Offense	3rd Guards Tank Army	N/U	270	N/U	9	30.00	19-Jul-44	27-Jul-44		
105	Lvov-Sandomierz Offense	3rd Guards Tank Army	N/U	75	N/U	6	12.50	29-Jul-44	03-Aug-44		
106	Lvov-Sandomierz Offense	3rd Guards Tank Army	N/U	39	N/U	26	1.50	04-Aug-44	29-Aug-44		
107	Lvov-Sandomierz Offense	4th Tank Army	N/U	180	N/U	9	20.00	19-Jul-44	27-Jul-44		
108	Lvov-Sandomierz Offense	4th Tank Army	N/U	80	N/U	6	13.33	29-Jul-44	03-Aug-44		
109	Lvov-Sandomierz Offense	4th Tank Army	N/U	39	N/U	26	1.50	04-Aug-44	29-Aug-44		
110	Lvov-Sandomierz Offense	4th Tank Army	N/U	270	N/U	9	30.00	19-Jul-44	27-Jul-44		
111	Lvov-Sandomierz Offense	4th Tank Army	N/U	110	N/U	5	22.00	23-Jul-44	27-Jul-44		
112	Lvov-Sandomierz Offense	4th Tank Army	N/U	135	N/U	5	27.00	20-Aug-44	24-Aug-44		
113	Lvov-Sandomierz Offense	4th Tank Army	N/U	190	N/U	5	38.00	25-Aug-44	29-Aug-44		
114	Lvov-Sandomierz Offense	4th Tank Army	N/U	135	N/U	5	27.00	20-Aug-44	24-Aug-44		
115	Lvov-Sandomierz Offense	4th Tank Army	N/U	165	N/U	5	33.00	25-Aug-44	29-Aug-44		
116	Lvov-Sandomierz Offense	4th Tank Army	N/U	25	N/U	6	4.17	13-Jan-45	18-Jan-45		
117	Lvov-Sandomierz Offense	4th Tank Army	N/U	90	N/U	8	11.25	19-Jan-45	26-Jan-45		
118	Lvov-Sandomierz Offense	4th Tank Army	N/U	110	N/U	8	13.75	19-Jan-45	26-Jan-45		
119	Lvov-Sandomierz Offense	4th Tank Army	N/U	55	N/U	6	9.17	13-Jan-45	18-Jan-45		
120	Lvov-Sandomierz Offense	4th Tank Army	N/U	150	N/U	8	18.75	19-Jan-45	26-Jan-45		
121	Lvov-Sandomierz Offense	4th Tank Army	N/U	210	N/U	8	26.25	19-Jan-45	26-Jan-45		
122	Lvov-Sandomierz Offense	4th Tank Army	N/U	15	N/U	1	15.00	14-Jan-45	14-Jan-45		
123	Lvov-Sandomierz Offense	4th Tank Army	N/U	19.5	N/U	1	19.50	15-Jan-45	15-Jan-45		
124	Lvov-Sandomierz Offense	4th Tank Army	N/U	17.5	N/U	1	17.50	16-Jan-45	16-Jan-45		
125	Lvov-Sandomierz Offense	4th Tank Army	N/U	30	N/U	1	30.00	17-Jan-45	17-Jan-45		
126	Lvov-Sandomierz Offense	4th Tank Army	N/U	25	N/U	1	25.00	18-Jan-45	18-Jan-45		
127	Lvov-Sandomierz Offense	4th Tank Army	N/U	27.5	N/U	1	27.50	19-Jan-45	19-Jan-45		
128	Lvov-Sandomierz Offense	4th Tank Army	N/U	30	N/U	1	30.00	20-Jan-45	20-Jan-45		
129	Lvov-Sandomierz Offense	4th Tank Army	N/U	30	N/U	1	30.00	21-Jan-45	21-Jan-45		
130	Lvov-Sandomierz Offense	4th Tank Army	N/U	32.5	N/U	1	32.50	22-Jan-45	22-Jan-45		
131	Lvov-Sandomierz Offense	4th Tank Army	N/U	35	N/U	1	35.00	23-Jan-45	23-Jan-45		
132	Lvov-Sandomierz Offense	4th Tank Army	N/U	32.5	N/U	1	32.50	24-Jan-45	24-Jan-45		
133	Lvov-Sandomierz Offense	4th Tank Army	N/U	27.5	N/U	1	27.50	25-Jan-45	25-Jan-45		
134	Lvov-Sandomierz Offense	4th Tank Army	N/U	25	N/U	1	25.00	26-Jan-45	26-Jan-45		
135	Lvov-Sandomierz Offense	4th Tank Army	N/U	27.5	N/U	1	27.50	27-Jan-45	27-Jan-45		

EASTFRONT

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
136	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	27.5	N/U	1	27.50	28-Jan-45	28-Jan-45			
137	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	10	N/U	1	10.00	29-Jan-45	29-Jan-45			
138	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	20	N/U	1	20.00	30-Jan-45	30-Jan-45			
139	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	32.5	N/U	1	32.50	31-Jan-45	31-Jan-45			
140	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	17.5	N/U	1	17.50	01-Feb-45	01-Feb-45			
141	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	20	N/U	1	20.00	02-Feb-45	02-Feb-45			
142	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	15	N/U	1	15.00	03-Feb-45	03-Feb-45			
143	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	11	N/U	1	11.00	15-Jan-45	15-Jan-45			
144	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	50	N/U	1	50.00	16-Jan-45	16-Jan-45			
145	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	35	N/U	1	35.00	17-Jan-45	17-Jan-45			
146	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	40	N/U	1	40.00	18-Jan-45	18-Jan-45			
147	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	57.5	N/U	1	57.50	19-Jan-45	19-Jan-45			
148	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	32.5	N/U	1	32.50	20-Jan-45	20-Jan-45			
149	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	47.5	N/U	1	47.50	21-Jan-45	21-Jan-45			
150	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	50	N/U	1	50.00	22-Jan-45	22-Jan-45			
151	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	32.5	N/U	1	32.50	23-Jan-45	23-Jan-45			
152	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	25	N/U	1	25.00	24-Jan-45	24-Jan-45			
153	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	30	N/U	1	30.00	25-Jan-45	25-Jan-45			
154	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	21	N/U	1	21.00	26-Jan-45	26-Jan-45			
155	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	7.5	N/U	1	7.50	27-Jan-45	27-Jan-45			
156	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	12.5	N/U	1	12.50	28-Jan-45	28-Jan-45			
157	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	20	N/U	1	20.00	29-Jan-45	29-Jan-45			
158	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	30	N/U	1	30.00	30-Jan-45	30-Jan-45			
159	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	37.5	N/U	1	37.50	31-Jan-45	31-Jan-45			
160	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	20	N/U	1	20.00	01-Feb-45	01-Feb-45			
161	Vistula-Oder Offensive	1st Byelorussian Army Grp	N/U	20	N/U	1	20.00	02-Feb-45	02-Feb-45			
162	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	17.5	N/U	1	17.50	12-Jan-45	12-Jan-45			
163	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	19	N/U	1	19.00	13-Jan-45	13-Jan-45			
164	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	17.5	N/U	1	17.50	14-Jan-45	14-Jan-45			
165	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	18.5	N/U	1	18.50	15-Jan-45	15-Jan-45			
166	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	27.5	N/U	1	27.50	16-Jan-45	16-Jan-45			
167	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	35	N/U	1	35.00	17-Jan-45	17-Jan-45			
168	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	20	N/U	1	20.00	18-Jan-45	18-Jan-45			
169	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	23.5	N/U	1	23.50	19-Jan-45	19-Jan-45			
170	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	30	N/U	1	30.00	20-Jan-45	20-Jan-45			
171	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	31.5	N/U	1	31.50	21-Jan-45	21-Jan-45			
172	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	26	N/U	1	26.00	22-Jan-45	22-Jan-45			
173	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	24	N/U	1	24.00	23-Jan-45	23-Jan-45			
174	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	28.5	N/U	1	28.50	24-Jan-45	24-Jan-45			
175	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	27.5	N/U	1	27.50	25-Jan-45	25-Jan-45			
176	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	15	N/U	1	15.00	26-Jan-45	26-Jan-45			
177	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	14.5	N/U	1	14.50	27-Jan-45	27-Jan-45			
178	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	14	N/U	1	14.00	28-Jan-45	28-Jan-45			
179	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	11.5	N/U	1	11.50	29-Jan-45	29-Jan-45			
180	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	11	N/U	1	11.00	30-Jan-45	30-Jan-45			

PART 5 OF 10

EASTFRONT

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
181	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	4	N/U	1	4.00	31-Jan-45	31-Jan-45			
182	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	14.5	N/U	1	14.50	12-Jan-45	12-Jan-45			
183	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	12.5	N/U	1	12.50	13-Jan-45	13-Jan-45			
184	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	22.5	N/U	1	22.50	14-Jan-45	14-Jan-45			
185	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	27.5	N/U	1	27.50	15-Jan-45	15-Jan-45			
186	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	17.5	N/U	1	17.50	16-Jan-45	16-Jan-45			
187	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	20	N/U	1	20.00	17-Jan-45	17-Jan-45			
188	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	17.5	N/U	1	17.50	18-Jan-45	18-Jan-45			
189	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	37.5	N/U	1	37.50	19-Jan-45	19-Jan-45			
190	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	37.5	N/U	1	37.50	20-Jan-45	20-Jan-45			
191	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	27.5	N/U	1	27.50	21-Jan-45	21-Jan-45			
192	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	27.5	N/U	1	27.50	22-Jan-45	22-Jan-45			
193	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	40	N/U	1	40.00	23-Jan-45	23-Jan-45			
194	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	35	N/U	1	35.00	24-Jan-45	24-Jan-45			
195	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	32.5	N/U	1	32.50	25-Jan-45	25-Jan-45			
196	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	30	N/U	1	30.00	26-Jan-45	26-Jan-45			
197	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	18.5	N/U	1	18.50	27-Jan-45	27-Jan-45			
198	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	5	N/U	1	5.00	28-Jan-45	28-Jan-45			
199	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	4	N/U	1	4.00	29-Jan-45	29-Jan-45			
200	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	5	N/U	1	5.00	30-Jan-45	30-Jan-45			
201	Vistula-Oder Offensive	1st Ukrainian Army Grp	N/U	2.5	N/U	1	2.50	31-Jan-45	31-Jan-45			
202	Manchurian Campaign	6th Guards Tank Army	N/U	820	N/U	10	82.00	08-Aug-45	17-Aug-45			
203	Manchurian Campaign	39th Combined Arms Army	N/U	380	N/U	10	38.00	08-Aug-45	17-Aug-45			
204	Manchurian Campaign	17th Combined Arms Army	N/U	450	N/U	10	45.00	08-Aug-45	17-Aug-45			
205	Manchurian Campaign	36th Combined Arms Army	N/U	450	N/U	10	45.00	08-Aug-45	17-Aug-45			
206	Manchurian Campaign	Soviet-Mongol Cav-Mech Grp	N/U	485	N/U	10	48.50	08-Aug-45	17-Aug-45			
207	Manchurian Campaign	1st Red Banner CAA	N/U	300	N/U	10	30.00	08-Aug-45	17-Aug-45			
208	Manchurian Campaign	5th Combined Arms Army	N/U	300	N/U	10	30.00	08-Aug-45	17-Aug-45			
209	Manchurian Campaign	35 Combined Arms Army	N/U	250	N/U	10	25.00	08-Aug-45	17-Aug-45			
210	Manchurian Campaign	25th Combined Arms Army	N/U	200	N/U	10	20.00	08-Aug-45	17-Aug-45			
211	Manchurian Campaign	15th Combined Arms Army	N/U	300	N/U	10	30.00	08-Aug-45	17-Aug-45			
212	Manchurian Campaign	2nd Red Banner CAA	N/U	200	N/U	10	20.00	08-Aug-45	17-Aug-45			

EASTFRONT

NO.	OPERATION NAME/PHASE	VEGETATION FOOTING FORCE SIZE	NOTES	COMMENTS
1	Defense of Moscow	Army	pg 45	
2	Defense of Moscow	Army		
3	Defense of Moscow	Army		
4	Defense of Moscow	Army		
5	Defense of Moscow	Army		
6	Defense of Moscow	Army		
7	Defense of Moscow	Army		
8	Defense of Moscow	Army		
9	Defense of Moscow	Army		
10	Defense of Moscow	Army		
11	Defense of Moscow	Army		
12	Defense of Moscow	Army		
13	Defense of Moscow	Army		
14	Defense of Moscow	Army		
15	Defense of Moscow	Army		
16	Defense of Moscow	Army		
17	Defense of Moscow	Army		
18	Defense of Moscow	Army		
19	Soviet Counteroffensive	A Grp	pg 58	
20	Soviet Counteroffensive	A Grp		
21	Soviet Counteroffensive	A Grp		
22	Soviet Counteroffensive	A Grp		
23	Soviet Counteroffensive	A Grp		
24	Soviet Counteroffensive	A Grp		
25	Soviet Counteroffensive	A Grp		
26	Soviet Counteroffensive	A Grp		
27	Soviet Counteroffensive	A Grp		
28	Soviet Counteroffensive	A Grp		
29	Soviet Counteroffensive	A Grp		
30	Soviet Counteroffensive	A Grp		
31	Soviet Counteroffensive	A Grp		
32	Citadel (Kursk)	A Grp	pg 89	Avg Ger advance/day
33	Citadel (Kursk)	A Grp		"
34	Citadel (Kursk)	A Grp		"
35	Citadel (Kursk)	A Grp		"
36	Citadel (Kursk)	A Grp		"
37	Citadel (Kursk)	A Grp		"
38	Citadel (Kursk)	A Grp		"
39	Citadel (Kursk)	A Grp		"
40	Citadel (Kursk)	A Grp		"
41	Citadel (Kursk)	A Grp		"
42	Citadel (Kursk)	A Grp		"
43	Citadel (Kursk)	A Grp		"
44	Citadel (Kursk)	A Grp		"
45	Melitopol Breakthrough	Army	pg 128	

EASTFRONT

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
46	Melitopol Breakthrough			Army		
47	Melitopol Breakthrough			Army		
48	Melitopol Breakthrough			Army		
49	Melitopol Breakthrough			Army		
50	Melitopol Breakthrough			Army		
51	Melitopol Pursuit			Army		
52	Melitopol Pursuit			Army		
53	Melitopol Pursuit			Army		
54	Melitopol Pursuit			Army		
55	Melitopol Pursuit			Army		
56	Melitopol Pursuit			Army		
57	Crimean Operation			A Grp	pg 148	
58	Crimean Operation			Army		
59	Byelorussian Offensive			A Grp	pg 163	
60	Byelorussian Offensive			A Grp		
61	Byelorussian Offensive			A Grp		
62	Byelorussian Offensive			A Grp		
63	Byelorussian Offensive			A Grp		
64	Byelorussian Offensive			A Grp		
65	Byelorussian Offensive			A Grp		
66	Byelorussian Offensive			A Grp		
67	Byelorussian Offensive			A Grp		
68	Byelorussian Offensive			A Grp		
69	Byelorussian Offensive			A Grp		
70	Byelorussian Offensive			A Grp		
71	Byelorussian Offensive			A Grp		
72	Byelorussian Offensive			A Grp		
73	Byelorussian Offensive			A Grp		
74	Byelorussian Offensive			A Grp		
75	Byelorussian Offensive			A Grp		
76	Byelorussian Offensive			A Grp		
77	Byelorussian Offensive			A Grp		
78	Byelorussian Offensive			A Grp		
79	Byelorussian Offensive			A Grp		
80	Lvov-Sandomierz Offensive			Army	pg 182	
81	Lvov-Sandomierz Offensive			Army		
82	Lvov-Sandomierz Offensive			Army		
83	Lvov-Sandomierz Offensive			Army		
84	Lvov-Sandomierz Offensive			Army		
85	Lvov-Sandomierz Offensive			Army		
86	Lvov-Sandomierz Offensive			Army		
87	Lvov-Sandomierz Offensive			Army		
88	Lvov-Sandomierz Offensive			Army		
89	Lvov-Sandomierz Offensive			Army		
90	Lvov-Sandomierz Offensive			Army		

Right Wing Only

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EASTFRONT

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
91	Lvov-Sandomierz Offense			Army		
92	Lvov-Sandomierz Offense			Army		
93	Lvov-Sandomierz Offense			Army		
94	Lvov-Sandomierz Offense			Army		
95	Lvov-Sandomierz Offense			Army		
96	Lvov-Sandomierz Offense			Army		
97	Lvov-Sandomierz Offense			Army		
98	Lvov-Sandomierz Offense			Army		
99	Lvov-Sandomierz Offense			Army		
100	Lvov-Sandomierz Offense			Army		
101	Lvov-Sandomierz Offense			Army		
102	Lvov-Sandomierz Offense			Army		
103	Lvov-Sandomierz Offense			Army		
104	Lvov-Sandomierz Offense			Army		
105	Lvov-Sandomierz Offense			Army		
106	Lvov-Sandomierz Offense			Army		
107	Lvov-Sandomierz Offense			Army		
108	Lvov-Sandomierz Offense			Army		
109	Lvov-Sandomierz Offense			Army		
110	Lvov-Sandomierz Offense			Army		
111	Lvov-Sandomierz Offense			Army		
112	Yassy-Kisinev Operation			A Grp pg 191		
113	Yassy-Kisinev Operation			A Grp		
114	Yassy-Kisinev Operation			A Grp		
115	Yassy-Kisinev Operation			A Grp		
116	Battle for East Prussia			A Grp pg 203	Breakthrough	
117	Battle for East Prussia			Army Exploit	Comb Arms Armies	
118	Battle for East Prussia			Army "	Mobile Troops	
119	Battle for East Prussia			A Grp pg 203	Breakthrough	
120	Battle for East Prussia			Army Exploit	Comb Arms Armies	
121	Battle for East Prussia			Army "	Mobile Troops	
122	Vistula-Oder Offensive			A Grp pg 217	Comb Arms Armies	
123	Vistula-Oder Offensive			A Grp	"	
124	Vistula-Oder Offensive			A Grp	"	
125	Vistula-Oder Offensive			A Grp	"	
126	Vistula-Oder Offensive			A Grp	"	
127	Vistula-Oder Offensive			A Grp	"	
128	Vistula-Oder Offensive			A Grp	"	
129	Vistula-Oder Offensive			A Grp	"	
130	Vistula-Oder Offensive			A Grp	"	
131	Vistula-Oder Offensive			A Grp	"	
132	Vistula-Oder Offensive			A Grp	"	
133	Vistula-Oder Offensive			A Grp	"	
134	Vistula-Oder Offensive			A Grp	"	
135	Vistula-Oder Offensive			A Grp	"	

PART 9 OF 10

EASTFRONT

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
136	Vistula-Oder Offensive			A Grp	"	
137	Vistula-Oder Offensive			A Grp	"	
138	Vistula-Oder Offensive			A Grp	"	
139	Vistula-Oder Offensive			A Grp	"	
140	Vistula-Oder Offensive			A Grp	"	
141	Vistula-Oder Offensive			A Grp	"	
142	Vistula-Oder Offensive			A Grp	"	
143	Vistula-Oder Offensive			A Grp	"	Tank Armies
144	Vistula-Oder Offensive			A Grp	"	
145	Vistula-Oder Offensive			A Grp	"	
146	Vistula-Oder Offensive			A Grp	"	
147	Vistula-Oder Offensive			A Grp	"	
148	Vistula-Oder Offensive			A Grp	"	
149	Vistula-Oder Offensive			A Grp	"	
150	Vistula-Oder Offensive			A Grp	"	
151	Vistula-Oder Offensive			A Grp	"	
152	Vistula-Oder Offensive			A Grp	"	
153	Vistula-Ode. Offensive			A Grp	"	
154	Vistula-Oder Offensive			A Grp	"	
155	Vistula-Oder Offensive			A Grp	"	
156	Vistula-Oder Offensive			A Grp	"	
157	Vistula-Oder Offensive			A Grp	"	
158	Vistula-Oder Offensive			A Grp	"	
159	Vistula-Oder Offensive			A Grp	"	
160	Vistula-Oder Offensive			A Grp	"	
161	Vistula-Oder Offensive			A Grp	"	
162	Vistula-Oder Offensive			A Grp	"	Comb Army Armies
163	Vistula-Oder Offensive			A Grp	"	
164	Vistula-Oder Offensive			A Grp	"	
165	Vistula-Oder Offensive			A Grp	"	
166	Vistula-Oder Offensive			A Grp	"	
167	Vistula-Oder Offensive			A Grp	"	
168	Vistula-Oder Offensive			A Grp	"	
169	Vistula-Oder Offensive			A Grp	"	
170	Vistula-Oder Offensive			A Grp	"	
171	Vistula-Oder Offensive			A Grp	"	
172	Vistula-Oder Offensive			A Grp	"	
173	Vistula-Oder Offensive			A Grp	"	
174	Vistula-Oder Offensive			A Grp	"	
175	Vistula-Oder Offensive			A Grp	"	
176	Vistula-Oder Offensive			A Grp	"	
177	Vistula-Oder Offensive			A Grp	"	
178	Vistula-Oder Offensive			A Grp	"	
179	Vistula-Oder Offensive			A Grp	"	
180	Vistula-Oder Offensive			A Grp	"	

EASTFRONT

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
181	Vistula-Oder Offensive			A Grp	"	"
182	Vistula-Oder Offensive			A Grp	"	Tank Armies
183	Vistula-Oder Offensive			A Grp	"	"
184	Vistula-Oder Offensive			A Grp	"	"
185	Vistula-Oder Offensive			A Grp	"	"
186	Vistula-Oder Offensive			A Grp	"	"
187	Vistula-Oder Offensive			A Grp	"	"
188	Vistula-Oder Offensive			A Grp	"	"
189	Vistula-Oder Offensive			A Grp	"	"
190	Vistula-Oder Offensive			A Grp	"	"
191	Vistula-Oder Offensive			A Grp	"	"
192	Vistula-Oder Offensive			A Grp	"	"
193	Vistula-Oder Offensive			A Grp	"	"
194	Vistula-Oder Offensive			A Grp	"	"
195	Vistula-Oder Offensive			A Grp	"	"
196	Vistula-Oder Offensive			A Grp	"	"
197	Vistula-Oder Offensive			A Grp	"	"
198	Vistula-Oder Offensive			A Grp	"	"
199	Vistula-Oder Offensive			A Grp	"	"
200	Vistula-Oder Offensive			A Grp	"	"
201	Vistula-Oder Offensive			A Grp	"	"
202	Manchurian Campaign			Army	pg 246	
203	Manchurian Campaign			Army		
204	Manchurian Campaign			Army		
205	Manchurian Campaign			Army		
206	Manchurian Campaign			Army		
207	Manchurian Campaign			Army		
208	Manchurian Campaign			Army		
209	Manchurian Campaign			Army		
210	Manchurian Campaign			Army		
211	Manchurian Campaign			Army		
212	Manchurian Campaign			Army		

ENGELS

1. Data Source:

- a. Title: Alexander the Great and the Logistics of the Macedonian Army
- b. Author: Engels, Donald W.
- c. Date: 1978
- d. Organization: University of California Press, Berkeley and Los Angeles
- e. Number: NA
- f. Available from: Publisher and libraries

2. Data Description:

a. The source's goal is to analyze the logistical operations associated with Alexander's operations. However, Table 7 of its Appendix 5 tabulates "Alexander's March Rates" for some 19 marches. Its values are in miles per day, which we have converted to kilometers per day. The source does not give the distances and elapsed times on which its rates are based.

b. The source often gives the values with a "(?)" appended, a "c." prefixed, or gives a range of values. Where ranges are given, we used a middling value, computed as the average of the high and low ends of the range.

3. Discussion and Comments:

- a. Apparently all of Alexander's march rates are to some extent uncertain.
- b. These advances are by forces that are lightly engaged. The values given here can be compared with those in, e.g., the ALEXANDE data base.

4. Data Table Notes:

- a. Note 1: Companions' cavalry, mounted scouts, mercenary horse, part of phalanx, archers and Agrianians.
- b. Note 2: Companions' cavalry, mounted javelin men, archers, two phalanx brigades.
- c. Note 3: Three Regiments Companions' cavalry, mounted javelin men, 1 phalanx brigade, regiment of bodyguard, Agrianians, one-half archers.
- d. Note 4: One-half Companions' cavalry, archers, Agrianians, lightest of phalanx.
- e. Note 5: Bodyguard, archers, Agrianians, one brigade infantry Companions, mounted archers, one-half Companions' cavalry.
- f. Note 6: Whole army minus fleet and Craterus' force.

PART 1 OF 2

ENGELS

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)(DAYS)	TIME	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N	MODE OF INTENS MOVEMENT
1	Macedonians	Pelina-Border of Boeotia	NA	NA	NA	NA	30.42	NA	NA	NA	NA
2	Macedonians	Onchestus-Thebes	NA	NA	NA	NA	16.90	NA	NA	NA	NA
3	Macedonians	Therma(?) - Sestos	NA	NA	NA	NA	26.07	NA	NA	NA	NA
4	Macedonians	Arisbe-Percote	NA	NA	NA	NA	11.27	NA	NA	NA	NA
5	Macedonians	Percote-Praktios River	NA	NA	NA	NA	17.70	NA	NA	NA	NA
6	Macedonians	Sardis-Ephesus	NA	NA	NA	NA	24.14	NA	NA	NA	NA
7	Macedonians	Gaza-Pelusium	NA	NA	NA	NA	31.38	NA	NA	NA	NA
8	Macedonians	Paraetionum-Ammon Oracle	NA	NA	NA	NA	36.21	NA	NA	NA	NA
9	Macedonians	Assyria	NA	NA	NA	NA	74.03	NA	NA	NA	NA
10	Macedonians	Babylon-Susa	NA	NA	NA	NA	19.79	NA	NA	NA	NA
11	Macedonians	Ecbatana-Rhagae	NA	NA	NA	NA	35.41	NA	NA	NA	NA
12	Macedonians	Rhagae-Airankief	NA	NA	NA	NA	54.72	NA	NA	NA	NA
13	Macedonians	Comisene	NA	NA	NA	NA	144.84	NA	NA	NA	NA
14	Macedonians	Comisene	NA	NA	NA	NA	53.59	NA	NA	NA	NA
15	Macedonians	Parthia	NA	NA	NA	NA	55.36	NA	NA	NA	NA
16	Macedonians	Sogdiana (Oxus to Nautaka?)	NA	NA	NA	NA	68.40	NA	NA	NA	NA
17	Macedonians	Sogdiana (Alexandria Eschete to Maracanda?)	NA	NA	NA	NA	92.54	NA	NA	NA	NA
18	Macedonians	Mallians' Territory	NA	NA	NA	NA	49.25	NA	NA	NA	NA
19	Macedonians	Oreitans' Territory to Pura	NA	NA	NA	NA	16.90	NA	NA	NA	NA

ENGELS

NO.	OPERATION NAME/PHASE	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
1	Macedonians	NA	NA	NA	Whole army	
2	Macedonians	NA	NA	NA	Whole army	
3	Macedonians	NA	NA	NA	Whole army	
4	Macedonians	NA	NA	NA	Whole army	
5	Macedonians	NA	NA	NA	Whole army	
6	Macedonians	NA	NA	NA	Whole army	
7	Macedonians	NA	NA	NA	Whole army	
8	Macedonians	NA	NA	NA	Small, light force	
9	Macedonians	NA	NA	NA	Cavalry only	
10	Macedonians	NA	NA	NA	Whole army	
11	Macedonians	NA	NA	NA	Note 1	
12	Macedonians	NA	NA	NA	Note 1	
13	Macedonians	NA	NA	NA	500 mounted infantry	
14	Macedonians	NA	NA	NA	Note 1	
15	Macedonians	NA	NA	NA	Note 2	
16	Macedonians	NA	NA	NA	Note 3	
17	Macedonians	NA	NA	NA	Note 4	
18	Macedonians	NA	NA	NA	Note 5	
19	Macedonians	NA	NA	NA	Note 6	

GLANTZ

1. Data Source:

- a. Title: Deep Attack: The Soviet Conduct of Operational Maneuver
- b. Author: Glantz, COL David M.
- c. Date: April 1987
- d. Organization: Soviet Army Studies Office, US Army Combined Arms Center, Fort Leavenworth, KS 66027
- e. Number: AD-A194 151
- f. Available from: DTIC

2. Data Description:

- a. The source's goal is to present and to analyze Soviet experiences with operational maneuver. The GLANTZ data are taken from the source's Appendix 4, "Tank Army Operations" and Appendix 5, "Tank/Mechanized Corps Operations."
- b. The source does not contain information on the environmental or operational factors such as terrain, weather, vegetation, intensity of opposition, etc.

3. Discussion and Comments:

- a. For the distances, I have used the last two columns of the source's tabulations. Where the source gives two values, I have assumed that they are cumulative and inclusive, and represent the distances from the line or position of commitment to the position reached by the OMG (Operational Maneuver Group) by the end of the corresponding time period (per personal communication from COL Glantz). These are not necessarily the values given by the Soviets. They are the values adopted by COL Glantz on the basis of his research and comparison of Soviet with German maps and archival records. Where cumulative values are given the GLANTZ data base lists their differences, which are the non-cumulative and non-inclusive values.
- b. For the times, I have used the last two columns of the source's tabulations. Where the source gives two values, I have assumed that they are cumulative and inclusive (per personal communication from COL Glantz). In such cases the GLANTZ data base lists their differences, which are the non-cumulative and non-inclusive values.
- c. The rates given in the GLANTZ data base are simply these distances divided by the corresponding times.
- d. The values given for "Day Committed," "Start Date-1," and "End Date-2" are those given by the source.
- e. The values given for "Opp'n Intens" are my own rough and doubtless controversial characterization of the intensity of the defender's opposition to the advance. Similarly, the data base values for "Mode of Movement" are my own rough characterization of the predominant or governing mode of movement—the one that dominated the pace of the advance.

f. Some portions of these data can be compared to data on Soviet advances given elsewhere. See, for example, portions of the data bases CDB90, EASTFRON, ORALFORE, RADZIEV, RECORD, SAVKIN, and ROWLAND. See also HERO Combat Data Subscription Service (Volume I, No. 1, 1975; Volume II, No. 1, Winter 1976; Volume II, No. 3, 1977; and Volume II, No. 4, 1978). See also Losik, O. A. (ed.), "Organization and Tactical Employment of Soviet Tank Forces During the Great Patriotic War," Military Publishing House, Ministry of Defense, USSR, Moscow, 1979.

4. Data Table Notes: None

GLANTZ

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	RATE (KM/DAY)	DAY COMMITTED	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	Voronezh	5th Tank Army	NU	25.00	4	6.25	1	JUL 42	NU	HVY	Motor	NA
2	Stalingrad	5th Tank Army	NU	120.00	3	40.00	1	NOV 42	NU	HVY	Motor	NA
3	Dorbas	Mobile Group Popov	NU	130.00	14	9.29	1	FEB 43	NU	HVY	Motor	NA
4	Karkov	3rd Tank Army	NU	170.00	25	6.80	2	FEB 43	NU	HVY	Motor	NA
5	Belgorod-Kharkov	1st Tank Army	NU	150.00	6	25.00	1	AUG 43	NU	HVY	Motor	NA
6	Belgorod-Kharkov	5th Guards Tank Army	NU	120.00	6	20.00	1	AUG 43	NU	HVY	Motor	NA
7	Krivoi-Rog	3rd Guards Tank Army	NU	90.00	8	11.25	1	OCT 43	NU	HVY	Motor	NA
8	Kiev	3rd Guards Tank Army	NU	95.00	5	19.00	2	NOV 43	NU	HVY	Motor	NA
9	Zhitomir-Berdichev	1st Guards Tank Army	NU	180.00	13	13.85	1	DEC 43	NU	HVY	Motor	NA
10	Zhitomir-Berdichev	3rd Guards Tank Army	NU	180.00	13	13.85	1	DEC 43	NU	HVY	Motor	NA
11	Kirovgrad	5th Guards Tank Army	NU	50.00	4.5	11.11	1	JAN 44	NU	HVY	Motor	NA
12	Korsun-Shevchenkovsky	5th Guards Tank Army	NU	75.00	6	12.50	1	JAN 44	NU	HVY	Motor	NA
13	Korsun-Shevchenkovsky	6th Guards Tank Army	NU	80.00	4	20.00	1	JAN 44	NU	HVY	Motor	NA
14	Proskurov-Chernovtsy	1st Guards Tank Army	NU	180.00	8	22.50	17	MAR 44	NU	HVY	Motor	NA
15	Proskurov-Chernovtsy	1st Guards Tank Army	NU	20.00	2	10.00	17	MAR 44	NU	HVY	Motor	NA
16	Proskurov-Chernovtsy	3rd Guards Tank Army	NU	100.00	3	33.33	1	MAR 44	NU	HVY	Motor	NA
17	Proskurov-Chernovtsy	3rd Guards Tank Army	NU	200.00	20	10.00	1	MAR 44	NU	HVY	Motor	NA
18	Proskurov-Chernovtsy	4th Tank Army	NU	100.00	3	33.33	1	MAR 44	NU	HVY	Motor	NA
19	Proskurov-Chernovtsy	4th Tank Army	NU	200.00	23	8.70	1	MAR 44	NU	HVY	Motor	NA
20	Uman-Botoshani	2nd Tank Army	NU	140.00	4	35.00	1	MAR 44	NU	HVY	Motor	NA
21	Uman-Botoshani	2nd Tank Army	NU	110.00	9	12.22	1	MAR 44	NU	HVY	Motor	NA
22	Uman-Botoshani	5th Guards Tank Army	NU	140.00	4	35.00	1	MAR 44	NU	HVY	Motor	NA
23	Uman-Botoshani	5th Guards Tank Army	NU	160.00	11	14.55	1	MAR 44	NU	HVY	Motor	NA
24	Uman-Botoshani	6th Tank Army	NU	140.00	4	35.00	2	MAR 44	NU	HVY	Motor	NA
25	Uman-Botoshani	6th Tank Army	NU	160.00	10	16.00	2	MAR 44	NU	HVY	Motor	NA
26	Belorussia	5th Guards Tank Army	NU	160.00	4	40.00	4	JUN 44	NU	MED	Motor	NA
27	Belorussia	5th Guards Tank Army	NU	300.00	9	33.33	4	JUN 44	NU	MED	Motor	NA
28	Belorussia	2nd Tank Army	NU	300.00	10	30.00	5	JUN 44	NU	MED	Motor	NA
29	Lvov-Sandomirsk	1st Guards Tank Army	NU	400.00	15	26.67	5	JUL 44	NU	MED	Motor	NA
30	Lvov-Sandomirsk	3rd Guards Tank Army	NU	300.00	12	25.00	3	JUL 44	NU	MED	Motor	NA
31	Lvov-Sandomirsk	3rd Guards Tank Army	NU	30.00	3	10.00	3	JUL 44	NU	MED	Motor	NA
32	Lvov-Sandomirsk	4th Tank Army	NU	350.00	13	26.92	5	JUL 44	NU	MED	Motor	NA
33	Yassy-Kishinev	6th Tank Army	NU	320.00	8	40.00	1	AUG 44	NU	MED	Motor	NA
34	Memel	5th Guards Tank Army	NU	110.00	5	22.00	2	OCT 44	NU	MED	Motor	NA
35	Debrecan	6th Guards Tank Army	NU	NA	NA	NA	1	OCT 44	NU	MED	Motor	NA
36	Vistula-Oder	1st Guards Tank Army	NU	610.00	17	35.88	2	JAN 45	NU	LITE	Motor	NA
37	Vistula-Oder	2nd Guards Tank Army	NU	705.00	17	41.47	3	JAN 45	NU	LITE	Motor	NA
38	Vistula-Oder	3rd Guards Tank Army	NU	480.00	17	28.24	1	JAN 45	NU	LITE	Motor	NA
39	Vistula-Oder	4th Tank Army	NU	400.00	13	30.77	1	JAN 45	NU	LITE	Motor	NA
40	East Prussia	5th Guards Tank Army	NU	220.00	6	36.67	4	JAN 45	NU	LITE	Motor	NA
41	East Prussia	5th Guards Tank Army	NU	30.00	6	5.00	4	JAN 45	NU	LITE	Motor	NA
42	East Pomerania	1st Guards Tank Army	NU	140.00	6	23.33	1	FEB 45	NU	LITE	Motor	NA
43	East Pomerania	2nd Guards Tank Army	NU	140.00	6	23.33	1	FEB 45	NU	LITE	Motor	NA
44	Budapest	6th Guards Tank Army	NU	200.00	NA	NA	1	NOV 44	NU	LITE	Motor	NA
45	Vienna	6th Guards Tank Army	NU	320.00	NA	NA	4	NA	NU	LITE	Motor	NA

GLANTZ

PART 2 OF 6

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	RATE (KM/DAY)	DAY COMMITTED	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
46	Berlin	1st Guards Tank Army	NU	110.00	18	6.11	1	APR 45	NU	LITE	Motor	NA
47	Berlin	2nd Guards Tank Army	NU	130.00	18	7.22	1	APR 45	NU	LITE	Motor	NA
48	Berlin	3rd Guards Tank Army	NU	190.00	17	11.18	1	APR 45	NU	LITE	Motor	NA
49	Berlin	4th Guards Tank Army	NU	220.00	17	12.94	1	APR 45	NU	LITE	Motor	NA
50	Prague	3rd Guards Tank Army	NU	190.00	NA	NA	1	MAY 45	NU	LITE	Motor	NA
51	Prague	4th Guards Tank Army	NU	180.00	NA	NA	1	MAY 45	NU	LITE	Motor	NA
52	Prague	6th Guards Tank Army	NU	180.00	NA	NA	1	MAY 45	NU	LITE	Motor	NA
53	Manchuria	6th Guards Tank Army	NU	820.00	10	82.00	1	AUG 45	NU	LITE	Motor	NA
54	Kharkov	21st Tank Corps	NU	13.50	2	6.75	6	MAY 42	NU	HVY	Motor	NA
55	Bely	1st Mechanized Corps	NU	27.5	4	6.88	2	NOV 42	NU	HVY	Motor	NA
56	Stalingrad	1st Tank Corps	NU	140	5	28.00	1	NOV 42	NU	HVY	Motor	NA
57	Stalingrad	26th Tank Corps	NU	120	3	40.00	1	NOV 42	NU	HVY	Motor	NA
58	Stalingrad	4th Tank Corps	NU	120	3	40.00	1	NOV 42	NU	HVY	Motor	NA
59	Stalingrad	13th Mechanized Corps	NU	50	4	12.50	1	NOV 42	NU	HVY	Motor	NA
60	Stalingrad	4th Mechanized Corps	NU	85	2.5	34.00	1	NOV 42	NU	HVY	Motor	NA
61	Kotelnikovsy	6th Mechanized Corps	NU	NA	NA	NA	1	DEC 42	NU	HVY	Motor	NA
62	Verkh-Kumskii	4th Mechanized Corps	NU	NA	NA	NA	1	DEC 42	NU	HVY	Motor	NA
63	Middle Don	17th Tank Corps	NU	180	8	22.50	1	DEC 42	NU	HVY	Motor	NA
64	Middle Don	18th Tank Corps	NU	215	11	19.55	1	DEC 42	NU	HVY	Motor	NA
65	Middle Don	25th Tank Corps	NU	200	8	25.00	1	DEC 42	NU	HVY	Motor	NA
66	Middle Don	24th Tank Corps	NU	230	7	32.86	3	DEC 42	NU	HVY	Motor	NA
67	Middle Don	1st Guards Mechanized Corps	NU	100	15	6.67	1	DEC 42	NU	HVY	Motor	NA
68	Rostov	6th Mechanized Corps	NU	NA	NA	NA	1	JAN 43	NU	HVY	Motor	NA
69	Donbas	4th Guards Tank Corps	NU	NA	NA	NA	1	FEB 43	NU	HVY	Motor	NA
70	Kharkov	12th Tank Corps	NU	170	25	6.80	2	FEB 43	NU	HVY	Motor	NA
71	Orel	11th Tank Corps	NU	20	10	2.00	1	JUL 43	NU	HVY	Motor	NA
72	Mius River	4th Guards Mechanized Corps	NU	NA	NA	NA	1	AUG 43	NU	HVY	Motor	NA
73	Belgorod-Kharkov	6th Tank Corps	NU	120	6	20.00	1	AUG 43	NU	HVY	Motor	NA
74	Belgorod-Kharkov	4th Guards Tank Corps	NU	100	9	11.11	1	AUG 43	NU	HVY	Motor	NA
75	Belgorod-Kharkov	1st Mechanized Corps	NU	90	20	4.50	1	AUG 43	NU	HVY	Foot	NA
76	Belgorod-Kharkov	3rd Guards Mechanized Corps	NU	40	7	5.71	1	AUG 43	NU	HVY	Motor	NA
77	Kalmus River	11th Tank Corps	NU	160	15	10.67	1	SEP 43	NU	HVY	Motor	NA
78	Kiev	5th Guards Tank Corps	NU	60	7	8.57	1	NOV 43	NU	HVY	Foot	NA
79	Zhitomir-Berdichev	4th Guards Tank Corps	NU	NA	NA	NA	1	DEC 43	NU	HVY	Motor	NA
80	Wikopol	4th Guards Mechanized Corps	NU	NA	NA	NA	2	JAN 44	NU	HVY	Motor	NA
81	Proskurov-Chernovtsy	4th Guards Tank Corps	NU	NA	NA	NA	1	MAR 44	NU	HVY	Motor	NA
82	Proskurov-Chernovtsy	6th Guards Tank Corps	NU	NA	NA	NA	1	MAR 44	NU	HVY	Motor	NA
83	Belorussia	1st Guards Tank Corps	NU	70	3	23.33	1	JUN 44	NU	MED	Motor	NA
84	Belorussia	9th Tank Corps	NU	110	7	15.71	1	JUN 44	NU	MED	Motor	NA
85	Belorussia	2nd Guards Tank Corps	NU	40	3	13.33	2	JUN 44	NU	MED	Motor	NA
86	Belorussia	2nd Guards Tank Corps	NU	130	4	32.50	4	JUN 44	NU	MED	Motor	NA
87	Belorussia	11th Tank Corps	NU	90	4	22.50	4	JUN 44	NU	MED	Motor	NA
88	Belorussia	3rd Guards Mechanized Corps	NU	NA	NA	NA	2	JUN 44	NU	MED	Motor	NA
89	Belorussia	3rd Guards Mechanized Corps	NU	130	5	26.00	2	JUN 44	NU	MED	Motor	NA
90	Belorussia	3rd Guards Mechanized Corps	NU	100	5	20.00	2	JUN 44	NU	MED	Motor	NA

PART 3 OF 6

GLANTZ

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	RATE (KM/DAY)	DAY COMMITTED	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
91	Belorussia	1st Mechanized Corps	NU	60	3	20.00	2	JUN 44	NU	MED	Motor	NA
92	Belorussia	1st Mechanized Corps	NU	110	5	22.00	2	JUN 44	NU	MED	Motor	NA
93	Lvov-Sandomirsk	4th Guards Tank Corps	NU	NA	NA	NA	4	JUL 44	NU	MED	Motor	NA
94	Yassy-Kishinev	5th Guards Tank Corps	NU	300	10	30.00	1	AUG 44	NU	MED	Motor	NA
95	Yassy-Kishinev	7th Mechanized Corps	NU	110	3	36.67	2	AUG 44	NU	MED	Motor	NA
96	Yassy-Kishinev	4th Guards Mechanized Corps	NU	120	3	40.00	2	AUG 44	NU	MED	Motor	NA
97	Vistula-Oder	11th Tank Corps	NU	120	4	30.00	1	JAN 45	NU	LITE	Motor	NA
98	Vistula-Oder	11th Tank Corps	NU	60	2	30.00	1	JAN 45	NU	LITE	Motor	NA
99	Vistula-Oder	4th Guards Tank Corps	NU	130	6	21.67	1	JAN 45	NU	LITE	Motor	NA
100	Vistula-Oder	31st Tank Corps	NU	125	8	15.63	1	JAN 45	NU	LITE	Motor	NA
101	Vistula-Oder	9th Tank Corps	NU	NA	NA	NA	1	JAN 45	NU	LITE	Motor	NA
102	East Prussia	8th Guards Tank Corps	NU	NA	NA	NA	2	JAN 45	NU	LITE	Motor	NA
103	East Prussia	10th Tank Corps	NU	220	6	36.67	4	JAN 45	NU	LITE	Motor	NA
104	East Prussia	10th Tank Corps	NU	30	6	5.00	4	JAN 45	NU	LITE	Motor	NA
105	East Pomerania	3rd Guards Tank Corps	NU	NA	NA	NA	2	FEB 45	NU	LITE	Motor	NA
106	East Pomerania	1st Mechanized Corps	NU	NA	NA	NA	1	FEB 45	NU	LITE	Motor	NA
107	Budapest	2nd Guards Mechanized Corps	NU	NA	NA	NA	1	NOV 44	JAN 45	LITE	Motor	NA
108	Budapest	4th Guards Mechanized Corps	NU	110	2	55.00	1	NOV 44	JAN 45	LITE	Motor	NA
109	Morava-Ostrava	5th Guards Mechanized Corps	NU	NA	NA	NA	3	MAR 45	NU	LITE	Motor	NA
110	Upper Silesia	5th Guards Mechanized Corps	NU	NA	NA	NA	1	MAR 45	NU	LITE	Motor	NA
111	Berlin	7th Guards Tank Corps	NU	190	17	11.18	1	APR 45	NU	LITE	Motor	NA
112	Berlin	11th Tank Corps	NU	110	17	6.47	1	APR 45	NU	LITE	Motor	NA
113	Berlin	9th Guards Tank Corps	NU	190	17	11.18	1	APR 45	NU	LITE	Motor	NA
114	Manchuria	9th Guards Mechanized Corps	NU	820	10	82.00	1	AUG 45	NU	LITE	Motor	NA

PART 4 OF 6

GLANTZ

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
1	Voronezh	NA	NA	ARMY	APP 4	
2	Stalingrad	NA	NA	ARMY	APP 4	
3	Dorbas	NA	NA	GROUP	APP 4	
4	Karkov	NA	NA	ARMY	APP 4	
5	Belgorod-Kharkov	NA	NA	ARMY	APP 4	
6	Belgorod-Kharkov	NA	NA	ARMY	APP 4	
7	Krivoi-Rog	NA	NA	ARMY	APP 4	
8	Kiev	NA	NA	ARMY	APP 4	
9	Zhitomir-Berdichev	NA	NA	ARMY	APP 4	
10	Zhitomir-Berdichev	NA	NA	ARMY	APP 4	
11	Kirovgrad	NA	NA	ARMY	APP 4	
12	Korsun-Shevchenkovsky	NA	NA	ARMY	APP 4	
13	Korsun-Shevchenkovsky	NA	NA	ARMY	APP 4	
14	Proskurov-Chernovtsy	NA	NA	ARMY	APP 4	
15	Proskurov-Chernovtsy	NA	NA	ARMY	APP 4	
16	Proskurov-Chernovtsy	NA	NA	ARMY	APP 4	
17	Proskurov-Chernovtsy	NA	NA	ARMY	APP 4	
18	Proskurov-Chernovtsy	NA	NA	ARMY	APP 4	
19	Proskurov-Chernovtsy	NA	NA	ARMY	APP 4	
20	Uman-Botoshani	NA	NA	ARMY	APP 4	
21	Uman-Botoshani	NA	NA	ARMY	APP 4	
22	Uman-Botoshani	NA	NA	ARMY	APP 4	
23	Uman-Botoshani	NA	NA	ARMY	APP 4	
24	Uman-Botoshani	NA	NA	ARMY	APP 4	
25	Uman-Botoshani	NA	NA	ARMY	APP 4	
26	Belorussia	NA	NA	ARMY	APP 4	
27	Belorussia	NA	NA	ARMY	APP 4	
28	Belorussia	NA	NA	ARMY	APP 4	
29	Lvov-Sandomirsk	NA	NA	ARMY	APP 4	
30	Lvov-Sandomirsk	NA	NA	ARMY	APP 4	
31	Lvov-Sandomirsk	NA	NA	ARMY	APP 4	
32	Lvov-Sandomirsk	NA	NA	ARMY	APP 4	
33	Yassy-Kishinev	NA	NA	ARMY	APP 4	
34	Memel	NA	NA	ARMY	APP 4	
35	Debrecean	NA	NA	ARMY	APP 4	
36	Vistula-Oder	NA	NA	ARMY	APP 4	
37	Vistula-Oder	NA	NA	ARMY	APP 4	
38	Vistula-Oder	NA	NA	ARMY	APP 4	
39	Vistula-Oder	NA	NA	ARMY	APP 4	
40	East Prussia	NA	NA	ARMY	APP 4	
41	East Prussia	NA	NA	ARMY	APP 4	
42	East Pomerania	NA	NA	ARMY	APP 4	
43	East Pomerania	NA	NA	ARMY	APP 4	
44	Budapest	NA	NA	ARMY	APP 4	
45	Vienna	NA	NA	ARMY	APP 4	

GLANTZ

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
46	Berlin	NA	NA	ARMY APP 4		
47	Berlin	NA	NA	ARMY APP 4		
48	Berlin	NA	NA	ARMY APP 4		
49	Berlin	NA	NA	ARMY APP 4		
50	Prague	NA	NA	ARMY APP 4		
51	Prague	NA	NA	ARMY APP 4		
52	Prague	NA	NA	ARMY APP 4		
53	Manchuria	NA	NA	ARMY APP 4		
54	Kharkov	NA	NA	CORPS APP 5		
55	Bely	NA	NA	CORPS APP 5		
56	Stalingrad	NA	NA	CORPS APP 5		
57	Stalingrad	NA	NA	CORPS APP 5		
58	Stalingrad	NA	NA	CORPS APP 5		
59	Stalingrad	NA	NA	CORPS APP 5		
60	Stalingrad	NA	NA	CORPS APP 5		
61	Kotelnikovsy	NA	NA	CORPS APP 5		
62	Verkh-Kumskii	NA	NA	CORPS APP 5		
63	Middle Don	NA	NA	CORPS APP 5		
64	Middle Don	NA	NA	CORPS APP 5		
65	Middle Don	NA	NA	CORPS APP 5		
66	Middle Don	NA	NA	CORPS APP 5		
67	Middle Don	NA	NA	CORPS APP 5		
68	Rostov	NA	NA	CORPS APP 5		
69	Donbas	NA	NA	CORPS APP 5		
70	Kharkov	NA	NA	CORPS APP 5		
71	Orel	NA	NA	CORPS APP 5		
72	Mius River	NA	NA	CORPS APP 5		
73	Belgorod-Kharkov	NA	NA	CORPS APP 5		
74	Belgorod-Kharkov	NA	NA	CORPS APP 5		
75	Belgorod-Kharkov	NA	NA	CORPS APP 5		
76	Belgorod-Kharkov	NA	NA	CORPS APP 5		
77	Kalmus River	NA	NA	CORPS APP 5		
78	Kiev	NA	NA	CORPS APP 5		
79	Zhitomir-Berdichev	NA	NA	CORPS APP 5		
80	Nikopol	NA	NA	CORPS APP 5		
81	Proskurov-Chernovtsy	NA	NA	CORPS APP 5		
82	Proskurov-Chernovtsy	NA	NA	CORPS APP 5		
83	Belorussia	NA	NA	CORPS APP 5		
84	Belorussia	NA	NA	CORPS APP 5		
85	Belorussia	NA	NA	CORPS APP 5		
86	Belorussia	NA	NA	CORPS APP 5		
87	Belorussia	NA	NA	CORPS APP 5		
88	Belorussia	NA	NA	CORPS APP 5		
89	Belorussia	NA	NA	CORPS APP 5		
90	Belorussia	NA	NA	CORPS APP 5		

Committed for infantry support

Committed for infantry support

PART 6 OF 6

GLANTZ

NO.	OPERATION NAME/PHASE	VEGETATION FOOTING			FORCE SIZE	NOTES	COMMENTS
		NA	NA	NA			
91	Belorussia	NA	NA	NA	CORPS	APP 5	
92	Belorussia	NA	NA	NA	CORPS	APP 5	
93	L'vov-Sandomirsk	NA	NA	NA	CORPS	APP 5	
94	Yassy-Kishinev	NA	NA	NA	CORPS	APP 5	
95	Yassy-Kishinev	NA	NA	NA	CORPS	APP 5	
96	Yassy-Kishinev	NA	NA	NA	CORPS	APP 5	
97	Vistula-Oder	NA	NA	NA	CORPS	APP 5	
98	Vistula-Oder	NA	NA	NA	CORPS	APP 5	
99	Vistula-Oder	NA	NA	NA	CORPS	APP 5	
100	Vistula-Oder	NA	NA	NA	CORPS	APP 5	
101	Vistula-Oder	NA	NA	NA	CORPS	APP 5	
102	East Prussia	NA	NA	NA	CORPS	APP 5	
103	East Prussia	NA	NA	NA	CORPS	APP 5	
104	East Prussia	NA	NA	NA	CORPS	APP 5	
105	East Pomerania	NA	NA	NA	CORPS	APP 5	
106	East Pomerania	NA	NA	NA	CORPS	APP 5	
107	Budapest	NA	NA	NA	CORPS	APP 5	
108	Budapest	NA	NA	NA	CORPS	APP 5	
109	Morava-Ostrava	NA	NA	NA	CORPS	APP 5	
110	Upper Silesia	NA	NA	NA	CORPS	APP 5	
111	Berlin	NA	NA	NA	CORPS	APP 5	
112	Berlin	NA	NA	NA	CORPS	APP 5	
113	Berlin	NA	NA	NA	CORPS	APP 5	
114	Manchuria	NA	NA	NA	CORPS	APP 5	

GUSTAVUS

1. Data Source:

a. Title: Gustavus Adolphus: A History of the Art of War From Its Revival After the Middle Ages to the End of the Spanish Succession War, With a Detailed Account of the Campaigns of the Great Swede, and of the Most Famous Campaigns of Turenne, Conde, Eugene and Marlborough

b. Author: Dodge, Theodore Ayrault

c. Date: 1895

d. Organization: The Riverside Press, Cambridge (Houghton, Mifflin and Company, Boston and New York)

e. Number: NA

f. Available from: Libraries

2. Data Description: The source's Appendix A lists "Some Modern Marches." These we have put into tabular form. Such notes or remarks as the source provides about the circumstances surrounding these marches are included in the data base or in the Data Table Notes given below.

3. Discussion and Comments:

a. This is one of a series of works by Dodge. For some others, see data bases ALEXANDE, CAESAR, HANNIBAL, and NAPOLEON.

b. These are advances by forces that are but lightly engaged.

4. Data Table Notes: The source's "Note 1" states "Elapsed time includes one rest day taken due to intense heat."

PART 1 OF 2

GUSTAVUS

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILE:)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT
1	Gustavus	Donauwörth to Naumburg	270	434.52	18	18	24.14	Oct 1632	Nov 1632	NA	All arms
2	Conde	Moselle to Fribourg	210	337.96	13	13	26.00	Aug 1644	Aug 1644	NA	All arms
3	Turenne	Scheidt-Sambre to Lys	75	120.70	3	3	40.23	1657	1657	NA	All arms
4	Turenne	Rhine to Sinsheim	90	144.84	4	4	36.21	Jun 1674	Jun 1674	NA	All arms
5	Charles XII	Vistula to Oder	180	289.68	10	10	28.97	Oct 1704	Oct 1704	NA	All Arms
6	Eugene	Reggio to Villa Stellona	240	386.24	16	16	24.14	Aug 1706	Aug 1706	NA	All Arms
7	Marlbrough	Brussels to Oudenarde	40	64.37	2	2	32.19	Jul 1708	Jul 1708	NA	All Arms
8	Duke of Hesse-Cassel	Douay to Oburg & Havre	49	78.86	2.33	2.33	33.80	Sep 1709	Sep 1709	NA	All arms

GUSTAVUS

NO.	OPERATION NAME/PHASE	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
1	Gustavus	NA	NA	NA	20,000	Bad roads
2	Conde	NA	NA	NA	10,000	
3	Turenne	NA	NA	NA	30,000	
4	Turenne	NA	NA	NA	9,000	
5	Charles XII	NA	NA	NA	20,000	Bad roads
6	Eugene	NA	NA	NA	25,000	See Note 1
7	Marlbrough	NA	NA	NA	65,000	
8	Duke of Hesse-Cassel	NA	NA	NA	10,000	

HANNIBAL

1. Data Source:

a. Title: Hannibal: A History of the Art of War Among the Carthaginians and Romans Down to the Battle of Pydna, 168 BC. With a Detailed Account of the Second Punic War

b. Author: Dodge, Theodore Ayrault

c. Date: 1891

d. Organization: The Riverside Press (Houghton, Mifflin and Company, Boston and New York)

e. Number: NA

f. Available from: Libraries

2. Data Description: The source's Appendix B describes "Some Roman Marches." These we have put into tabular form. Such notes or remarks as the source provides about the circumstances surrounding these marches are included in the data base or in the Data Table Notes given below.

3. Discussion and Comments:

a. This is one of a series of works by Dodge. For some others, see data bases ALEXANDE, CAESAR, GUSTAVUS, and NAPOLEON.

b. These advances are by forces that are only lightly engaged.

4. Data Table Notes: The source's "Note 1" states "The only march worth adding to the Table in Appendix A, of Alexander, is that of the Consul Nero, who, in 207 BC, with 7000 men, marched from the vicinity of Canusium to the Sena, some 250 miles, in seven days, and back again in six, meanwhile, with the Consul Livius, winning the battle of the Metaurus. Wagons were furnished for the tired infantrymen by the country people along the route. This was 38 1/2 miles a day, counting the battle-day as the full equivalent of a march. It is one of the most noteworthy marches in history. Mention of rapid marches is not often made by Polybius or Livy."

PART 1 OF 2

HANNIBAL

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT
1	Romans	NA	15	24.14	1	1	24.14	200 BC	200 BC	NA	Foot
2	Consul Sempronius	Lilybaeum to Ariminum	650	1046.07	40	40	26.15	218 BC	218 BC	NA	Foot
3	Consul Nero	Canusium to Sena	250	402.34	7	7	57.48	207 BC	207 BC	NA	Foot
4	Consul Nero	Sena to Canusium	250	402.34	6	6	67.06	207 BC	207 BC	NA	Foot

PART 2 OF 2

HANNIBAL

NO.	OPERATION NAME/PHASE	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
1	Romans	NA	NA	NA	NA	Typical Roman rate of march
2	Consul Sempronius	NA	NA	NA	20000	
3	Consul Nero	NA	NA	NA	7000	
4	Consul Nero	NA	NA	NA	7000	See Note 1

HULSE

1. Data Source:

- a. Title: Movement
- b. Author: Hulse, COL Allen D.
- c. Date: 9 August 1954
- d. Organization: Combat Operations Research Group
- e. Number: Staff Memorandum SM-22-CORG
- f. Available From: Wainstein, Leonard, "An Examination of the Parsons and Hulse Papers on Rates of Advance," Paper P-991, Institute for Defense Analyses, December 1973, AD-779 848

2. Data Description:

- a. The source's purpose was to examine historical data and review the actions played in the CODEM war game in order to improve the modeling of movement.
- b. It presents 19 examples from WWII advances made by US armored divisions or mixed task forces within those divisions (chiefly armored battalions or combat commands). Of these, 11 were from NW Europe in 1944, 5 from NW Europe in 1945, and 3 from Italy in 1944.
- c. The HULSE data are taken from the source's Enclosure 1. It appears to have obtained its information from after-action reports of the US 1st, 2d, 3d, 4th, and 5th Armored Divisions, and "The US Army in World War II, European Theater of Operations: The Lorraine Campaign" for information on the operations of the US 4th, 6th, and 10th Armored Divisions.
- d. Distance is not specifically defined, but presumably is the displacement of the FEBA.
- e. The situational descriptors are defined as follows:
 - (1) Terrain: Characterized as moderately open, close, mountainous but no objective definitions of these are given.
 - (2) Weather: Clear, mild, cold, snow, fog, rain, misty, fair—again objective definitions are not given.
 - (3) Type action: Pursuit, limited objective attack, exploitation of a breakthrough, seizure of a deep objective after breaking out of a bridgehead, attack through infantry to seize a deep objective.
 - (4) Enemy strength: Very light resistance, heavy, moderate—again without objective definitions.
 - (5) Friendly casualties: (seldom known).
 - (6) Enemy casualties: (unknown in all cases).

3. Discussion and Comments:

a. The HULSE data base contains both instances of heavily engaged forces and of lightly engaged forces. The data base itself provides little information on how to distinguish them.

b. The HULSE data base concentrates on armored battalion and combat command operations. See the PARSONS data base for a parallel study of infantry battalion operations.

c. This is a preliminary quick study to find what can be done in the way of collecting and summarizing combat data for use in wargames and analyses. Wainstein (see paragraph 1f, above) has also remarked on that fact and has given a detailed critique of both Hulse's and Parsons' papers. Wainstein observes correctly that:

(1) Both Hulse's and Parsons' papers are rough, hasty, and tentative reports of initial efforts, rather than finished products intended to provide a firm foundation for broadly-based generalizations.

(2) Neither Hulse's nor Parsons' numerical data on enemy strength and opposing forces can be historically confirmed.

(3) Not all of Hulse's and Parsons' distance and duration values can be confirmed by consulting their original sources. Sometimes the original data did not appear to support any specific distance or duration estimate, and in some cases Wainstein found values that differed somewhat from those given by Hulse and Parsons.

4. Data Table Notes: None.

PART 1 OF 2

HULSE

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (HOURS)(DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	Villiers/Normandy	CCA, 3rd Armd Div	2.27	3.66	NU 2.00	1.83	29-Jun-44	30-Jun-44	Heavy	Motor	Flat
2	Seine-Marne/France	CCA, CCB, 3rd Armd Div	41.00	65.98	NU 2.00	32.99	26-Aug-44	27-Aug-44	Light	Motor	Rolling
3	Meaux-Soissons/France	CCB, 3rd Armd Div	45.00	72.42	16 0.67	108.63	28-Aug-44	28-Aug-44	Light	Motor	Rolling
4	Charleroi-Wuy/Belgium	CCB, 3rd Armd Div	60.00	96.56	NU 3.00	32.19	04-Sep-44	06-Sep-44	Light	Motor	Rolling
5	Ardennes Forest/France	TF McGeorge, 3d Armd Div	6.00	9.66	NU 5.00	1.93	03-Jan-45	07-Jan-45	Heavy	Motor	Hilly
6	Duren-Erft Canal/W Ger	TF Wellborn, 3d Armd Div	10.00	16.09	36 1.50	10.73	26-Feb-45	28-Feb-45	Medium	Motor	Hilly
7	Remagen-Lippstadt/W Ger	3d Armd Div	179.00	288.07	NU 6.00	48.01	25-Mar-45	30-Mar-45	Light	Motor	Hilly
8	Nancy, France	CCA, 4th Armd Div	17.00	27.36	NU 1.00	27.36	13-Sep-44	13-Sep-44	Light	Motor	Hilly
9	Lorraine, France	TF Hunter, 4th Armd Div	10.00	16.09	NU 2.00	8.05	10-Nov-44	11-Nov-44	Light	Motor	Hilly
10	Metz, France	TF Chamberlain, 10th Armd D	14.00	22.53	NU 4.00	5.63	15-Nov-44	18-Nov-44	Light	Motor	Hilly
11	Lorraine, France	6th Armd Div	15.00	24.14	NU 3.00	8.05	09-Nov-44	11-Nov-44	Medium	Motor	Rolling
12	Siegfried Line (W Ger)	2d Armd Div (Reinf)	7.00	11.27	NU 13.00	0.87	16-Nov-44	28-Nov-44	Heavy	Motor	Flat
13	Julich-Krefeld/Rhine R.	2d Armd Div	32.00	51.50	NU 4.00	12.87	28-Feb-45	03-Mar-45	Light	Motor	Rolling
14	Lazio, Italy	CCB, 1st Armd Div	20.00	32.19	NU 1.00	32.19	06-Jun-44	06-Jun-44	Light	Motor	Rolling
15	Southern Tuscany, Italy	1st Armd Div, Reinf	35.00	56.33	NU 7.00	8.05	21-Jun-44	27-Jun-44	Light	Motor	Mountain
16	Po Valley, Italy	CCA, 1st Armd Div	75.00	120.70	NU 4.00	30.18	25-Apr-45	28-Apr-45	Light	Motor	Rolling
17	Ruhr, W Ger	2d Armd Div, Reinf	70.00	112.65	NU 3.00	37.55	30-Mar-45	02-Apr-45	Light	Motor	Rolling
18	Huertgen For, W Ger	10th Tk Bn(+), 5th Armd Div	0.85	1.37	10 0.42	3.29	29-Nov-44	29-Nov-44	Medium	Motor	Hilly
19	"	CCR, 5th Armd Div	0.91	1.46	11 0.46	3.19	02-Dec-44	03-Dec-44	Heavy	Motor	Hilly

HULSE

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
1	Villiers/Normandy	Wooded	Firm	Bde	Clear, mild, hedgerow
2	Seine-Marne/France	Open	Firm	Bde	Clear, mild
3	Meaux-Soissons/France	Open	Firm	Bde	Clear, mild
4	Charleroi-Huy/Belgium	Open	Firm	Bde	Clear, mild
5	Ardennes Forest/France	Wooded	Snow	Bde	Cold, snow, fog
6	Duren-Erft Canal/W Ger	Urban	Wet	Rgt	Cold, rain, mist
7	Remagen-Lippstadt/W Ger	Open	Firm	Div	Clear, cool
8	Nancy, France	Wooded	Firm	Bde	Fair, mild
9	Lorraine, France	Wooded	Mud	Bn	Cold, wet
10	Metz, France	Wooded	Mud	Bn	Cold, snow, rain
11	Lorraine, France	Wooded	Wet	Div	Cold, fair
12	Stegfried Line (W Ger)	Urban	Wet	Div	Cold, rain
13	Julich-Krefeld/Rhine R.	Urban	Firm	Div	Cold, clear
14	Lazio, Italy	Open	Firm	Bde	Clear, mild
15	Southern Tuscany, Italy	NA	Firm	Div	Clear, mild
16	Po Valley, Italy	Open	NA	Bde	NA
17	Ruhr, W Ger	Open	Firm	Div	Clear, mild
18	Huertgen For, W Ger	Wooded	Snow	Bn	Cold, rain, snow
19	"	Wooded	Wet	Bde	Cold, wet, foggy

LONGMARX

1. Data Source:

- a. Title: The Long March, 1935: The Epic of Chinese Communism's Survival
- b. Author: Wilson, Dick
- c. Date: 1982
- d. Organization: Penguin Books, New York, NY (originally published by Hamish Hamilton, LTD, London, 1971)
- e. Number: NA
- f. Available from: CAA Technical Library

2. Data Description:

- a. The LONGMARX data are taken from "The Daily Itinerary of the Long March," given in Appendix B of the source. It cites the following as its basis:

(1) Yu Ku, "The Itinerary of the Long March of the Red Army," I-Ching, Shanghai, 20 July 1937, pp 40-44.

(2) Chu, Li Fu, "Erh-wan Wu-chien Li Chang-cheng Chi (The Long March)," Shanghai, 1937, pp 54-63.

- b. The data are for the 1st Army Corps only, and not the main body, which was the 1st Front Army. The 1st Army Corps was the vanguard of the march and covered more distance because of the feints, probes, reconnaissance, and other actions for which it was responsible. The source gives daily advance rates in miles, which it calculated from its sources by taking 3 li to the mile and rounding off fractions.

c. Breaking out of the encirclement of their Kiangsi base by Chiang Kai-Shek's Kuomintang forces on 16 October 1935, about 100,000 Chinese Communists began their Long March (85,000 troops, 15,000 support and administrative personnel, and 35 women). They ended their Long March in Shangsai Province in northwest China on 21 October 1936 with about 8,000 Chinese Communists. They marched on foot, supported by pack animals. Only a handful of the highest ranking commanders rode horses, and no mechanically powered vehicles of any type were used. On the march, the Communists were persistently pursued, harassed, and bombed by Kuomintang forces. Their attrition was due partly to killed; to wounded left behind; to accidents, disease, exposure, starvation, and physical exhaustion; to prisoners, missing and deserters; and to the deliberate formation of small stay-behind groups tasked with gathering intelligence, conducting sabotage and terror operations, starting new revolutionary cells, building local Communist guerilla forces, and politically indoctrinating the populace. The official record of this year-long march claims that the 1st Front Army was involved in an average of one skirmish each day of the march, fought 15 days of major pitched battles, and made 253 marches and 18 night marches, with 100 days of bivouac. One of their commanders stated that they marched over 18 mountain ranges, 5 of which were permanently snow-covered, crossed 24 rivers, took 62 cities or towns, and fought free of at least 10 attempted encirclements by provincial warlords.

3. Discussion and Comments:

- a. The accuracy of the Long March data is questionable. There has been a persistent Chinese Communist tendency to mythologize and propagandize what was, without the need for any exaggeration, one of the most remarkable epics of human struggle and endurance. For example, the Chinese refer to it as "The 25,000-Li March,"

even though the daily distances in the itinerary sum only to about 18,000 li. Also, while the Mandarin li of about 1/3 miles is the one most commonly used, there are several other distance units used in China, all of different lengths, and all called "li."

b. When the daily distances listed in the source are converted from miles back to li at the rate of 3 li to the mile, with due regard for the rounding off of distances to the nearest mile, it can be seen that the original data must have given daily distances in round numbers of li, normally to the nearest 10 li, and only on a few occasions to the nearest 5 li. Apparently, many of the distances are subjective impressions, or based on recollection, rather than actually measured. According to the source, many of their records were lost to accidents or enemy action during the march, and some of the others were deliberately destroyed to lighten the burden or to prevent their falling into enemy hands.

c. Moreover, 18,000 li travelled in 371 days averages out to 26.0 km/day (16.2 miles/day), including halts and bivouacs—or to 35.6 km/day (22.1 miles/day) if only the 271 marching days are used. These rates of advance are incredibly high for sustained foot marches.

d. The source provides a few schematic maps showing the paths taken by the main elements of the 1st Army Corps on the Long March. Dr. Robert L. Helmbold of CAA has measured the longest and most circuitous of these routes with a map measuring instrument. Five independent measurements were made, and these were averaged to find a total distance travelled of 3,370 miles with a measurement error (standard deviation) of about 50 miles, or 1.5 percent. This is to be compared with the claimed, and oft-quoted, distance of 6,000 miles. The measured distances correspond to only about 10,000 li instead of the 18,000 claimed—much less the poetic 25,000 li. At 3,370 miles, we compute an average of 14.6 km/day (9.1 miles/day) for the elapsed time of 371 days, or 20.0 km/day (12.4 miles/day) for the 271 marching days. These rates of advance, while still rather high and providing evidence of a remarkable feat, are far more credible than the higher figures.

e. The route of the First Front Army is shown on Plate No. 19 of Griess, Thomas E. (ed.), "The West Point Military History Series: Atlas for the Arab-Israeli Wars, the Chinese Civil War, and the Korean War," Avery Publishing Group Inc., Wayne, NJ, 1986. Four measurements of the distance gave an average of 3,265 miles, again with a measurement error (standard deviation) of about 50 miles.

f. Thus, the accuracy and validity of the Long March data seem highly suspect, considering the loss of records, distances reported only to the nearest 10 li, the well-known Chinese tendency to mythologize the Long March, the incredibly high rates of march implied by the longer distance claims, and the disparity between the claimed distances and those measured from the maps.

4. **Data Table Notes:** The data base gives daily advance distances on the Long March, according to the source. The first day of the march is 16 October 1934, and the 1st Army Corps is recorded as having travelled 10 miles on this day. A question mark (?) is entered when the source gives no distance for some day.

LONGHARX

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR ETC. (Point of Departure)	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	The Long March	Tunglowan	10	16.09	1	1	16.09	16-Oct-34	16-Oct-34	NA	FOOT	NA
2	The Long March	Shanwangpa	23	37.01	1	1	37.01	17-Oct-34	17-Oct-34	NA	FOOT	NA
3	The Long March	Hsiayu	23	37.01	1	1	37.01	18-Oct-34	18-Oct-34	NA	FOOT	NA
4	The Long March	Hsiangshe	0	0.00	1	1	0.00	19-Oct-34	19-Oct-34	NA	FOOT	NA
5	The Long March	Hsiangshe	20	32.19	1	1	32.19	20-Oct-34	20-Oct-34	NA	FOOT	NA
6	The Long March	Shuangwan	20	32.19	1	1	32.19	21-Oct-34	21-Oct-34	NA	FOOT	NA
7	The Long March	Hsintien	30	48.28	1	1	48.28	22-Oct-34	22-Oct-34	NA	FOOT	NA
8	The Long March	Taping	30	48.28	1	1	48.28	23-Oct-34	23-Oct-34	NA	FOOT	NA
9	The Long March	Taping	0	0.00	1	1	0.00	24-Oct-34	24-Oct-34	NA	FOOT	NA
10	The Long March	Shihsaiyu	30	48.28	1	1	48.28	25-Oct-34	25-Oct-34	NA	FOOT	NA
11	The Long March	Laohiehtzuyu	30	48.28	1	1	48.28	26-Oct-34	26-Oct-34	NA	FOOT	NA
12	The Long March	Sanchiangkou	30	48.28	1	1	48.28	27-Oct-34	27-Oct-34	NA	FOOT	NA
13	The Long March	Nantsun	30	48.28	1	1	48.28	28-Oct-34	28-Oct-34	NA	FOOT	NA
14	The Long March	Yianyu	0	0.00	1	1	0.00	29-Oct-34	29-Oct-34	NA	FOOT	NA
15	The Long March	Yianyu	0	0.00	1	1	0.00	30-Oct-34	30-Oct-34	NA	FOOT	NA
16	The Long March	Yianyu	30	48.28	1	1	48.28	31-Oct-34	31-Oct-34	NA	FOOT	NA
17	The Long March	Wientu	30	48.28	1	1	48.28	01-Nov-34	01-Nov-34	NA	FOOT	NA
18	The Long March	Lipiling	27	43.45	1	1	43.45	02-Nov-34	02-Nov-34	NA	FOOT	NA
19	The Long March	Chenshe	30	48.28	1	1	48.28	03-Nov-34	03-Nov-34	NA	FOOT	NA
20	The Long March	Sanchiangkou	7	11.27	1	1	11.27	04-Nov-34	04-Nov-34	NA	FOOT	NA
21	The Long March	Chengkou	20	32.19	1	1	32.19	05-Nov-34	05-Nov-34	NA	FOOT	NA
22	The Long March	Hsintien	27	43.45	1	1	43.45	06-Nov-34	06-Nov-34	NA	FOOT	NA
23	The Long March	Makeng	30	48.28	1	1	48.28	07-Nov-34	07-Nov-34	NA	FOOT	NA
24	The Long March	Shanghsikeng	0	0.00	1	1	0.00	08-Nov-34	08-Nov-34	NA	FOOT	NA
25	The Long March	Shanghsikeng	23	37.01	1	1	37.01	09-Nov-34	09-Nov-34	NA	FOOT	NA
26	The Long March	Taichukeng	23	37.01	1	1	37.01	10-Nov-34	10-Nov-34	NA	FOOT	NA
27	The Long March	Pengkuling	20	32.19	1	1	32.19	11-Nov-34	11-Nov-34	NA	FOOT	NA
28	The Long March	Sanchiehny	23	37.01	1	1	37.01	12-Nov-34	12-Nov-34	NA	FOOT	NA
29	The Long March	Pingtien	17	27.36	1	1	27.36	13-Nov-34	13-Nov-34	NA	FOOT	NA
30	The Long March	Paishito	0	0.00	1	1	0.00	14-Nov-34	14-Nov-34	NA	FOOT	NA
31	The Long March	Paishito	20	32.19	1	1	32.19	15-Nov-34	15-Nov-34	NA	FOOT	NA
32	The Long March	Meitien	30	48.28	1	1	48.28	16-Nov-34	16-Nov-34	NA	FOOT	NA
33	The Long March	Linwu	0	0.00	1	1	0.00	17-Nov-34	17-Nov-34	NA	FOOT	NA
34	The Long March	Linwu	20	32.19	1	1	32.19	18-Nov-34	18-Nov-34	NA	FOOT	NA
35	The Long March	Yangkulingyao	27	43.45	1	1	43.45	19-Nov-34	19-Nov-34	NA	FOOT	NA
36	The Long March	Chuchiayu	0	0.00	1	1	0.00	20-Nov-34	20-Nov-34	NA	FOOT	NA
37	The Long March	Chuchiayu	27	43.45	1	1	43.45	21-Nov-34	21-Nov-34	NA	FOOT	NA
38	The Long March	Tientangyu	10	16.09	1	1	16.09	22-Nov-34	22-Nov-34	NA	FOOT	NA
39	The Long March	Paishuitang	30	48.28	1	1	48.28	23-Nov-34	23-Nov-34	NA	FOOT	NA
40	The Long March	Taichou	20	32.19	1	1	32.19	24-Nov-34	24-Nov-34	NA	FOOT	NA
41	The Long March	Chiangchialing	13	20.92	1	1	20.92	25-Nov-34	25-Nov-34	NA	FOOT	NA
42	The Long March	Hsiangkou	7	11.27	1	1	11.27	26-Nov-34	26-Nov-34	NA	FOOT	NA
43	The Long March	Wenshih	0	0.00	1	1	0.00	27-Nov-34	27-Nov-34	NA	FOOT	NA
44	The Long March	Wenshih	23	37.01	1	1	37.01	28-Nov-34	28-Nov-34	NA	FOOT	NA
45	The Long March	Shiitangyu	20	32.19	1	1	32.19	29-Nov-34	29-Nov-34	NA	FOOT	NA

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LONGMARX

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR ETC. (Point of Departure)	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
46	The Long March	Shaoshui	0	0.00	1	1	0.00	30-Nov-34	30-Nov-34	NA	FOOT	NA
47	The Long March	Shaoshui	13	20.92	1	1	20.92	01-Dec-34	01-Dec-34	NA	FOOT	NA
48	The Long March	Tawan	23	37.01	1	1	37.01	02-Dec-34	02-Dec-34	NA	FOOT	NA
49	The Long March	Yuchaping	20	32.19	1	1	32.19	03-Dec-34	03-Dec-34	NA	FOOT	NA
50	The Long March	Ssushihntien	13	20.92	1	1	20.92	04-Dec-34	04-Dec-34	NA	FOOT	NA
51	The Long March	Chantou	23	37.01	1	1	37.01	05-Dec-34	05-Dec-34	NA	FOOT	NA
52	The Long March	Henglukou	13	20.92	1	1	20.92	06-Dec-34	06-Dec-34	NA	FOOT	NA
53	The Long March	Chayuan	0	0.00	1	1	0.00	07-Dec-34	07-Dec-34	NA	FOOT	NA
54	The Long March	Chayuan	22	35.41	1	1	35.40	08-Dec-34	08-Dec-34	NA	FOOT	NA
55	The Long March	Paichuping	23	37.01	1	1	37.01	09-Dec-34	09-Dec-34	NA	FOOT	NA
56	The Long March	Pingteng	23	37.01	1	1	37.01	10-Dec-34	10-Dec-34	NA	FOOT	NA
57	The Long March	Liuyen	27	43.45	1	1	43.45	11-Dec-34	11-Dec-34	NA	FOOT	NA
58	The Long March	Chintien	23	37.01	1	1	37.01	12-Dec-34	12-Dec-34	NA	FOOT	NA
59	The Long March	Hsintu	20	32.19	1	1	32.19	13-Dec-34	13-Dec-34	NA	FOOT	NA
60	The Long March	Pingchaso	23	37.01	1	1	37.01	14-Dec-34	14-Dec-34	NA	FOOT	NA
61	The Long March	Kutun	25	40.23	1	1	40.23	15-Dec-34	15-Dec-34	NA	FOOT	NA
62	The Long March	Papiao	0	0.00	1	1	0.00	16-Dec-34	16-Dec-34	NA	FOOT	NA
63	The Long March	Papiao	0	0.00	1	1	0.00	17-Dec-34	17-Dec-34	NA	FOOT	NA
64	The Long March	Papiao	22	35.41	1	1	35.40	18-Dec-34	18-Dec-34	NA	FOOT	NA
65	The Long March	Hokou	22	35.41	1	1	35.40	19-Dec-34	19-Dec-34	NA	FOOT	NA
66	The Long March	Liuchai	27	43.45	1	1	43.45	20-Dec-34	20-Dec-34	NA	FOOT	NA
67	The Long March	Nanshao	17	27.36	1	1	27.36	21-Dec-34	21-Dec-34	NA	FOOT	NA
68	The Long March	Chienho	22	35.41	1	1	35.40	22-Dec-34	22-Dec-34	NA	FOOT	NA
69	The Long March	Shangkietung	22	35.41	1	1	35.40	23-Dec-34	23-Dec-34	NA	FOOT	NA
70	The Long March	Pienchai	0	0.00	1	1	0.00	24-Dec-34	24-Dec-34	NA	FOOT	NA
71	The Long March	Pienchai	22	35.41	1	1	35.40	25-Dec-34	25-Dec-34	NA	FOOT	NA
72	The Long March	Wengkulung	22	35.41	1	1	35.40	26-Dec-34	26-Dec-34	NA	FOOT	NA
73	The Long March	Shihping	0	0.00	1	1	0.00	27-Dec-34	27-Dec-34	NA	FOOT	NA
74	The Long March	Shihping	0	0.00	1	1	0.00	28-Dec-34	28-Dec-34	NA	FOOT	NA
75	The Long March	Shihping	25	40.23	1	1	40.23	29-Dec-34	29-Dec-34	NA	FOOT	NA
76	The Long March	Laotangchai	17	27.36	1	1	27.36	30-Dec-34	30-Dec-34	NA	FOOT	NA
77	The Long March	Yuching	0	0.00	1	1	0.00	31-Dec-34	31-Dec-34	NA	FOOT	NA
78	The Long March	Yuching	23	37.01	1	1	37.01	01-Jan-35	01-Jan-35	NA	FOOT	NA
79	The Long March	Lungshi	17	27.36	1	1	27.36	02-Jan-35	02-Jan-35	NA	FOOT	NA
80	The Long March	Chingkiangyuan	0	0.00	1	1	0.00	03-Jan-35	03-Jan-35	NA	FOOT	NA
81	The Long March	Chingkiangyuan	20	32.19	1	1	32.19	04-Jan-35	04-Jan-35	NA	FOOT	NA
82	The Long March	Yuchingszu	20	32.19	1	1	32.19	05-Jan-35	05-Jan-35	NA	FOOT	NA
83	The Long March	Shuanghsiangpu	20	32.19	1	1	32.19	06-Jan-35	06-Jan-35	NA	FOOT	NA
84	The Long March	Huangchiapa	23	37.01	1	1	37.01	07-Jan-35	07-Jan-35	NA	FOOT	NA
85	The Long March	Chiatzuchang	22	35.41	1	1	35.40	08-Jan-35	08-Jan-35	NA	FOOT	NA
86	The Long March	Liyupa	0	0.00	1	1	0.00	09-Jan-35	09-Jan-35	NA	FOOT	NA
87	The Long March	Liyupa	0	0.00	1	1	0.00	10-Jan-35	10-Jan-35	NA	FOOT	NA
88	The Long March	Liyupa	0	0.00	1	1	0.00	11-Jan-35	11-Jan-35	NA	FOOT	NA
89	The Long March	Liyupa	0	0.00	1	1	0.00	12-Jan-35	12-Jan-35	NA	FOOT	NA
90	The Long March	Liyupa	25	40.23	1	1	40.23	13-Jan-35	13-Jan-35	NA	FOOT	NA

LONGMARX

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR ETC. (Point of Departure)	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
91	The Long March	Ssuehchuan	20	32.19	1	1	32.19	14-Jan-35	14-Jan-35	NA	FOOT	NA
92	The Long March	Tungtzuchen	22	35.41	1	1	35.40	15-Jan-35	15-Jan-35	NA	FOOT	NA
93	The Long March	Shimenchuing	22	35.41	1	1	35.40	16-Jan-35	16-Jan-35	NA	FOOT	NA
94	The Long March	Erhlitzu	10	16.09	1	1	16.09	17-Jan-35	17-Jan-35	NA	FOOT	NA
95	The Long March	Sungkan	0	0.00	1	1	0.00	18-Jan-35	18-Jan-35	NA	FOOT	NA
96	The Long March	Sungkan	0	0.00	1	1	0.00	19-Jan-35	19-Jan-35	NA	FOOT	NA
97	The Long March	Sungkan	0	0.00	1	1	0.00	20-Jan-35	20-Jan-35	NA	FOOT	NA
98	The Long March	Sungkan	23	37.01	1	1	37.01	21-Jan-35	21-Jan-35	NA	FOOT	NA
99	The Long March	Shihhao	20	32.19	1	1	32.19	22-Jan-35	22-Jan-35	NA	FOOT	NA
100	The Long March	Wenshui	25	40.23	1	1	40.23	23-Jan-35	23-Jan-35	NA	FOOT	NA
101	The Long March	Tushuchan	27	43.45	1	1	43.45	24-Jan-35	24-Jan-35	NA	FOOT	NA
102	The Long March	Shicheng	10	16.09	1	1	16.09	25-Jan-35	25-Jan-35	NA	FOOT	NA
103	The Long March	Yuanhou	17	27.36	1	1	27.36	26-Jan-35	26-Jan-35	NA	FOOT	NA
104	The Long March	Patan	17	27.36	1	1	27.36	27-Jan-35	27-Jan-35	NA	FOOT	NA
105	The Long March	Yuanhou	0	0.00	1	1	0.00	28-Jan-35	28-Jan-35	NA	FOOT	NA
106	The Long March	Yuanhou	27	43.45	1	1	43.45	29-Jan-35	29-Jan-35	NA	FOOT	NA
107	The Long March	Malupa	23	37.01	1	1	37.01	30-Jan-35	30-Jan-35	NA	FOOT	NA
108	The Long March	Lungchaopa	23	37.01	1	1	37.01	31-Jan-35	31-Jan-35	NA	FOOT	NA
109	The Long March	Hsianglampa	12	19.31	1	1	19.31	01-Feb-35	01-Feb-35	NA	FOOT	NA
110	The Long March	Tachai	20	32.19	1	1	32.19	02-Feb-35	02-Feb-35	NA	FOOT	NA
111	The Long March	Yungning	23	37.01	1	1	37.01	03-Feb-35	03-Feb-35	NA	FOOT	NA
112	The Long March	Chinochih	20	32.19	1	1	32.19	04-Feb-35	04-Feb-35	NA	FOOT	NA
113	The Long March	Tapa	8	12.87	1	1	12.87	05-Feb-35	05-Feb-35	NA	FOOT	NA
114	The Long March	Wutsun	30	48.28	1	1	48.28	06-Feb-35	06-Feb-35	NA	FOOT	NA
115	The Long March	Chienwuchen	17	27.36	1	1	27.36	07-Feb-35	07-Feb-35	NA	FOOT	NA
116	The Long March	Lohai	20	32.19	1	1	32.19	08-Feb-35	08-Feb-35	NA	FOOT	NA
117	The Long March	Sankoutang	23	37.01	1	1	37.01	09-Feb-35	09-Feb-35	NA	FOOT	NA
118	The Long March	Kuanhsiung	0	0.00	1	1	0.00	10-Feb-35	10-Feb-35	NA	FOOT	NA
119	The Long March	Kuanhsiung	20	32.19	1	1	32.19	11-Feb-35	11-Feb-35	NA	FOOT	NA
120	The Long March	Chahsi	20	32.19	1	1	32.19	12-Feb-35	12-Feb-35	NA	FOOT	NA
121	The Long March	Taiplingshang	22	35.41	1	1	35.40	13-Feb-35	13-Feb-35	NA	FOOT	NA
122	The Long March	Panyaho	23	37.01	1	1	37.01	14-Feb-35	14-Feb-35	NA	FOOT	NA
123	The Long March	Yingpanshan	22	35.41	1	1	35.40	15-Feb-35	15-Feb-35	NA	FOOT	NA
124	The Long March	Shuangtsun	22	35.41	1	1	35.40	16-Feb-35	16-Feb-35	NA	FOOT	NA
125	The Long March	Muchiaotun	23	37.01	1	1	37.01	17-Feb-35	17-Feb-35	NA	FOOT	NA
126	The Long March	Chenlungshan	20	32.19	1	1	32.19	18-Feb-35	18-Feb-35	NA	FOOT	NA
127	The Long March	Tsounapa	22	35.41	1	1	35.40	19-Feb-35	19-Feb-35	NA	FOOT	NA
128	The Long March	Mayikou	0	0.00	1	1	0.00	20-Feb-35	20-Feb-35	NA	FOOT	NA
129	The Long March	Mayikou	23	37.01	1	1	37.01	21-Feb-35	21-Feb-35	NA	FOOT	NA
130	The Long March	Tungkuangtien	20	32.19	1	1	32.19	22-Feb-35	22-Feb-35	NA	FOOT	NA
131	The Long March	Tashuichiao	23	37.01	1	1	37.01	23-Feb-35	23-Feb-35	NA	FOOT	NA
132	The Long March	Shuanglungchang	23	37.01	1	1	37.01	24-Feb-35	24-Feb-35	NA	FOOT	NA
133	The Long March	Hotsun	20	32.19	1	1	32.19	25-Feb-35	25-Feb-35	NA	FOOT	NA
134	The Long March	Litzupa	22	35.41	1	1	35.40	26-Feb-35	26-Feb-35	NA	FOOT	NA
135	The Long March	Hsiashermiao	33	53.11	1	1	53.11	27-Feb-35	27-Feb-35	NA	FOOT	NA

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR ETC. (Point of Departure)	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
136	The Long March	Tsunyi	17	27.36	1	1	27.36	28-Feb-35	28-Feb-35	NA	FOOT	NA
137	The Long March	Liangshuiching	23	37.01	1	1	37.01	01-Mar-35	01-Mar-35	NA	FOOT	NA
138	The Long March	Chintaokeng	22	35.41	1	1	35.40	02-Mar-35	02-Mar-35	NA	FOOT	NA
139	The Long March	Tsunyi	0	0.00	1	1	0.00	03-Mar-35	03-Mar-35	NA	FOOT	NA
140	The Long March	Tsunyi	0	0.00	1	1	0.00	04-Mar-35	04-Mar-35	NA	FOOT	NA
141	The Long March	Tsunyi	23	37.01	1	1	37.01	05-Mar-35	05-Mar-35	NA	FOOT	NA
142	The Long March	Tsaihsi	7	11.27	1	1	11.27	06-Mar-35	06-Mar-35	NA	FOOT	NA
143	The Long March	Tipa	0	0.00	1	1	0.00	07-Mar-35	07-Mar-35	NA	FOOT	NA
144	The Long March	Tipa	0	0.00	1	1	0.00	08-Mar-35	08-Mar-35	NA	FOOT	NA
145	The Long March	Tipa	22	35.41	1	1	35.40	09-Mar-35	09-Mar-35	NA	FOOT	NA
146	The Long March	Changkanshan	10	16.09	1	1	16.09	10-Mar-35	10-Mar-35	NA	FOOT	NA
147	The Long March	Pingchiachai	0	0.00	1	1	0.00	11-Mar-35	11-Mar-35	NA	FOOT	NA
148	The Long March	Pingchiachai	17	27.36	1	1	27.36	12-Mar-35	12-Mar-35	NA	FOOT	NA
149	The Long March	Tienpa	20	32.19	1	1	32.19	13-Mar-35	13-Mar-35	NA	FOOT	NA
150	The Long March	Yunganshan	17	27.36	1	1	27.36	14-Mar-35	14-Mar-35	NA	FOOT	NA
151	The Long March	Mingkuangszu	13	20.92	1	1	20.92	15-Mar-35	15-Mar-35	NA	FOOT	NA
152	The Long March	Wengshihpa	17	27.36	1	1	27.36	16-Mar-35	16-Mar-35	NA	FOOT	NA
153	The Long March	Maotai	20	32.19	1	1	32.19	17-Mar-35	17-Mar-35	NA	FOOT	NA
154	The Long March	Isotzupa	17	27.36	1	1	27.36	18-Mar-35	18-Mar-35	NA	FOOT	NA
155	The Long March	Sannupa	20	32.19	1	1	32.19	19-Mar-35	19-Mar-35	NA	FOOT	NA
156	The Long March	Yucha	0	0.00	1	1	0.00	20-Mar-35	20-Mar-35	NA	FOOT	NA
157	The Long March	Yucha	27	43.45	1	1	43.45	21-Mar-35	21-Mar-35	NA	FOOT	NA
158	The Long March	Yenfankou	23	37.01	1	1	37.01	22-Mar-35	22-Mar-35	NA	FOOT	NA
159	The Long March	Anchingshan	30	48.28	1	1	48.28	23-Mar-35	23-Mar-35	NA	FOOT	NA
160	The Long March	Kuoshihkang	27	43.45	1	1	43.45	24-Mar-35	24-Mar-35	NA	FOOT	NA
161	The Long March	Suufangtu	23	37.01	1	1	37.01	25-Mar-35	25-Mar-35	NA	FOOT	NA
162	The Long March	Paitien	23	37.01	1	1	37.01	26-Mar-35	26-Mar-35	NA	FOOT	NA
163	The Long March	Hoti	20	32.19	1	1	32.19	27-Mar-35	27-Mar-35	NA	FOOT	NA
164	The Long March	Tipa	0	0.00	1	1	0.00	28-Mar-35	28-Mar-35	NA	FOOT	NA
165	The Long March	Tipa	17	27.36	1	1	27.36	29-Mar-35	29-Mar-35	NA	FOOT	NA
166	The Long March	Shatu	20	32.19	1	1	32.19	30-Mar-35	30-Mar-35	NA	FOOT	NA
167	The Long March	Wukiangho	17	27.36	1	1	27.36	31-Mar-35	31-Mar-35	NA	FOOT	NA
168	The Long March	Wangchiaping	13	20.92	1	1	20.92	01-Apr-35	01-Apr-35	NA	FOOT	NA
169	The Long March	Hsiao lungwo	13	20.92	1	1	20.92	02-Apr-35	02-Apr-35	NA	FOOT	NA
170	The Long March	Laoyaho	27	43.45	1	1	43.45	03-Apr-35	03-Apr-35	NA	FOOT	NA
171	The Long March	Tiwope	23	37.01	1	1	37.01	04-Apr-35	04-Apr-35	NA	FOOT	NA
172	The Long March	Yangchang	12	19.31	1	1	19.31	05-Apr-35	05-Apr-35	NA	FOOT	NA
173	The Long March	Kaochai	10	16.09	1	1	16.09	06-Apr-35	06-Apr-35	NA	FOOT	NA
174	The Long March	Kangchai	23	37.01	1	1	37.01	07-Apr-35	07-Apr-35	NA	FOOT	NA
175	The Long March	Laopahsiang	30	48.28	1	1	48.28	08-Apr-35	08-Apr-35	NA	FOOT	NA
176	The Long March	Shaokuantien	27	43.45	1	1	43.45	09-Apr-35	09-Apr-35	NA	FOOT	NA
177	The Long March	Chichangpu	27	43.45	1	1	43.45	10-Apr-35	10-Apr-35	NA	FOOT	NA
178	The Long March	Tingangpu	20	32.19	1	1	32.19	11-Apr-35	11-Apr-35	NA	FOOT	NA
179	The Long March	Yangmaochang	20	32.19	1	1	32.19	12-Apr-35	12-Apr-35	NA	FOOT	NA
180	The Long March	Supeichiao	17	27.36	1	1	27.36	13-Apr-35	13-Apr-35	NA	FOOT	NA

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR ETC. (Point of Departure)	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
181	The Long March	Pache	23	37.01	1	1	37.01	14-Apr-35	14-Apr-35	NA	FOOT	NA
182	The Long March	Chuchang	23	37.01	1	1	37.01	15-Apr-35	15-Apr-35	NA	FOOT	NA
183	The Long March	Laya	27	43.45	1	1	43.45	16-Apr-35	16-Apr-35	NA	FOOT	NA
184	The Long March	Yangchia	27	43.45	1	1	43.45	17-Apr-35	17-Apr-35	NA	FOOT	NA
185	The Long March	Lachih	23	37.01	1	1	37.01	18-Apr-35	18-Apr-35	NA	FOOT	NA
186	The Long March	Talan	27	43.45	1	1	43.45	19-Apr-35	19-Apr-35	NA	FOOT	NA
187	The Long March	Pethsiang	23	37.01	1	1	37.01	20-Apr-35	20-Apr-35	NA	FOOT	NA
188	The Long March	Yangshihun	30	48.28	1	1	48.28	21-Apr-35	21-Apr-35	NA	FOOT	NA
189	The Long March	Kuanyinshan	27	43.45	1	1	43.45	22-Apr-35	22-Apr-35	NA	FOOT	NA
190	The Long March	Chuchang	27	43.45	1	1	43.45	23-Apr-35	23-Apr-35	NA	FOOT	NA
191	The Long March	Paiyunching	20	32.19	1	1	32.19	24-Apr-35	24-Apr-35	NA	FOOT	NA
192	The Long March	Kuantang	7	11.27	1	1	11.27	25-Apr-35	25-Apr-35	NA	FOOT	NA
193	The Long March	Hsiliushui	27	43.45	1	1	43.45	26-Apr-35	26-Apr-35	NA	FOOT	NA
194	The Long March	Chutzuchieh	28	45.06	1	1	45.06	27-Apr-35	27-Apr-35	NA	FOOT	NA
195	The Long March	Chitoutsun	28	45.06	1	1	45.06	28-Apr-35	28-Apr-35	NA	FOOT	NA
196	The Long March	Tsoohstehchaiao	27	43.45	1	1	43.45	29-Apr-35	29-Apr-35	NA	FOOT	NA
197	The Long March	Sungming	23	37.01	1	1	37.01	30-Apr-35	30-Apr-35	NA	FOOT	NA
198	The Long March	Lengshuikou	47	75.64	1	1	75.64	01-May-35	01-May-35	NA	FOOT	NA
199	The Long March	China	33	53.11	1	1	53.11	02-May-35	02-May-35	NA	FOOT	NA
200	The Long March	Huachiao	30	48.28	1	1	48.28	03-May-35	03-May-35	NA	FOOT	NA
201	The Long March	Wutuo	27	43.45	1	1	43.45	04-May-35	04-May-35	NA	FOOT	NA
202	The Long March	Hsiachili	7	11.27	1	1	11.27	05-May-35	05-May-35	NA	FOOT	NA
203	The Long March	Talapo	37	59.55	1	1	59.54	06-May-35	06-May-35	NA	FOOT	NA
204	The Long March	Makou	33	53.11	1	1	53.11	07-May-35	07-May-35	NA	FOOT	NA
205	The Long March	Shatan	33	53.11	1	1	53.11	08-May-35	08-May-35	NA	FOOT	NA
206	The Long March	Chinshakiangpin	17	27.36	1	1	27.36	09-May-35	09-May-35	NA	FOOT	NA
207	The Long March	Tungan	27	43.45	1	1	43.45	10-May-35	10-May-35	NA	FOOT	NA
208	The Long March	Kuanyinchiao	13	20.92	1	1	20.92	11-May-35	11-May-35	NA	FOOT	NA
209	The Long March	Tachiao	0	0.00	1	1	0.00	12-May-35	12-May-35	NA	FOOT	NA
210	The Long March	Tachiao	0	0.00	1	1	0.00	13-May-35	13-May-35	NA	FOOT	NA
211	The Long March	Tachiao	20	32.19	1	1	32.19	14-May-35	14-May-35	NA	FOOT	NA
212	The Long March	Yunnawan	33	53.11	1	1	53.11	15-May-35	15-May-35	NA	FOOT	NA
213	The Long March	Chinchuanichiao	33	53.11	1	1	53.11	16-May-35	16-May-35	NA	FOOT	NA
214	The Long March	Tehchang	27	43.45	1	1	43.45	17-May-35	17-May-35	NA	FOOT	NA
215	The Long March	Wangshuitang	27	43.45	1	1	43.45	18-May-35	18-May-35	NA	FOOT	NA
216	The Long March	Chennanszu	23	37.01	1	1	37.01	19-May-35	19-May-35	NA	FOOT	NA
217	The Long March	Tukuanchung	27	43.45	1	1	43.45	20-May-35	20-May-35	NA	FOOT	NA
218	The Long March	Luku	23	37.01	1	1	37.01	21-May-35	21-May-35	NA	FOOT	NA
219	The Long March	Mienning	0	0.00	1	1	0.00	22-May-35	22-May-35	NA	FOOT	NA
220	The Long March	Mienning	28	45.06	1	1	45.06	23-May-35	23-May-35	NA	FOOT	NA
221	The Long March	Towu	27	43.45	1	1	43.45	24-May-35	24-May-35	NA	FOOT	NA
222	The Long March	Hsiaoputzu	20	32.19	1	1	32.19	25-May-35	25-May-35	NA	FOOT	NA
223	The Long March	Anshunchang	0	0.00	1	1	0.00	26-May-35	26-May-35	NA	FOOT	NA
224	The Long March	Anshunchang	27	43.45	1	1	43.45	27-May-35	27-May-35	NA	FOOT	NA
225	The Long March	Tienwan	10	16.09	1	1	16.09	28-May-35	28-May-35	NA	FOOT	NA

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR ETC. (Point of Departure)	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
226	The Long March	Moksimien	33	53.11	1	1	53.11	29-May-35	29-May-35	NA	FOOT	NA
227	The Long March	Shangtienpa	20	32.19	1	1	32.19	30-May-35	30-May-35	NA	FOOT	NA
228	The Long March	Lutingchiao	27	43.45	1	1	43.45	31-May-35	31-May-35	NA	FOOT	NA
229	The Long March	Pushulching	17	27.36	1	1	27.36	01-Jun-35	01-Jun-35	NA	FOOT	NA
230	The Long March	Santaochiao	20	32.19	1	1	32.19	02-Jun-35	02-Jun-35	NA	FOOT	NA
231	The Long March	Huchuangchieh	23	37.01	1	1	37.01	03-Jun-35	03-Jun-35	NA	FOOT	NA
232	The Long March	Tachiao	20	32.19	1	1	32.19	04-Jun-35	04-Jun-35	NA	FOOT	NA
233	The Long March	Shihping	20	32.19	1	1	32.19	05-Jun-35	05-Jun-35	NA	FOOT	NA
234	The Long March	Chenchiapa	13	20.92	1	1	20.92	06-Jun-35	06-Jun-35	NA	FOOT	NA
235	The Long March	Liuchiakou	8	12.87	1	1	12.87	07-Jun-35	07-Jun-35	NA	FOOT	NA
236	The Long March	Shihyang	40	64.37	1	1	64.37	08-Jun-35	08-Jun-35	NA	FOOT	NA
237	The Long March	Lushanhsien	8	12.87	1	1	12.87	09-Jun-35	09-Jun-35	NA	FOOT	NA
238	The Long March	Hunchiapa	23	37.01	1	1	37.01	10-Jun-35	10-Jun-35	NA	FOOT	NA
239	The Long March	Hsiaokuantzu	20	32.19	1	1	32.19	11-Jun-35	11-Jun-35	NA	FOOT	NA
240	The Long March	Paohsinghsien	27	43.45	1	1	43.45	12-Jun-35	12-Jun-35	NA	FOOT	NA
241	The Long March	Fengtungya	27	43.45	1	1	43.45	13-Jun-35	13-Jun-35	NA	FOOT	NA
242	The Long March	Tachiao	40	64.37	1	1	64.37	14-Jun-35	14-Jun-35	NA	FOOT	NA
243	The Long March	Tawei	15	24.14	1	1	24.14	15-Jun-35	15-Jun-35	NA	FOOT	NA
244	The Long March	Kuanchai	15	24.14	1	1	24.14	16-Jun-35	16-Jun-35	NA	FOOT	NA
245	The Long March	Moukung	20	32.19	1	1	32.19	17-Jun-35	17-Jun-35	NA	FOOT	NA
246	The Long March	Pachiao	0	0.00	1	1	0.00	18-Jun-35	18-Jun-35	NA	FOOT	NA
247	The Long March	Pachiao	0	0.00	1	1	0.00	19-Jun-35	19-Jun-35	NA	FOOT	NA
248	The Long March	Pachiao	0	0.00	1	1	0.00	20-Jun-35	20-Jun-35	NA	FOOT	NA
249	The Long March	Pachiao	0	0.00	1	1	0.00	21-Jun-35	21-Jun-35	NA	FOOT	NA
250	The Long March	Pachiao	0	0.00	1	1	0.00	22-Jun-35	22-Jun-35	NA	FOOT	NA
251	The Long March	Pachiao	17	27.36	1	1	27.36	23-Jun-35	23-Jun-35	NA	FOOT	NA
252	The Long March	Fupien	23	37.01	1	1	37.01	24-Jun-35	24-Jun-35	NA	FOOT	NA
253	The Long March	Lianghokou	0	0.00	1	1	0.00	25-Jun-35	25-Jun-35	NA	FOOT	NA
254	The Long March	Lianghokou	10	16.09	1	1	16.09	26-Jun-35	26-Jun-35	NA	FOOT	NA
255	The Long March	Huangtsaoping	33	53.11	1	1	53.11	27-Jun-35	27-Jun-35	NA	FOOT	NA
256	The Long March	Chokechi	0	0.00	1	1	0.00	28-Jun-35	28-Jun-35	NA	FOOT	NA
257	The Long March	Chokechi	27	43.45	1	1	43.45	29-Jun-35	29-Jun-35	NA	FOOT	NA
258	The Long March	Somo	23	37.01	1	1	37.01	30-Jun-35	30-Jun-35	NA	FOOT	NA
259	The Long March	Matang	10	16.09	1	1	16.09	01-Jul-35	01-Jul-35	NA	FOOT	NA
260	The Long March	Kangmiaoussu	27	43.45	1	1	43.45	02-Jul-35	02-Jul-35	NA	FOOT	NA
261	The Long March	Chaitou	23	37.01	1	1	37.01	03-Jul-35	03-Jul-35	NA	FOOT	NA
262	The Long March	Tsangte	0	0.00	1	1	0.00	04-Jul-35	04-Jul-35	NA	FOOT	NA
263	The Long March	Tsangte	0	0.00	1	1	0.00	05-Jul-35	05-Jul-35	NA	FOOT	NA
264	The Long March	Taku	23	37.01	1	1	37.01	06-Jul-35	06-Jul-35	NA	FOOT	NA
265	The Long March	Tolokang	33	53.11	1	1	53.11	07-Jul-35	07-Jul-35	NA	FOOT	NA
266	The Long March	Tachulin	33	53.11	1	1	53.11	08-Jul-35	08-Jul-35	NA	FOOT	NA
267	The Long March	Limassu	30	48.28	1	1	48.28	09-Jul-35	09-Jul-35	NA	FOOT	NA
268	The Long March	Maoerhkai	3	4.83	1	1	4.83	10-Jul-35	10-Jul-35	NA	FOOT	NA
269	The Long March	Maoerhkai	0	0.00	1	1	0.00	11-Jul-35	11-Jul-35	NA	FOOT	NA
270	The Long March	Maoerhkai	0	0.00	1	1	0.00	12-Jul-35	12-Jul-35	NA	FOOT	NA

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271	The Long March	Maoerhkai	0	0.00	1	1	0.00	13-Jul-35	13-Jul-35	NA	FOOT	NA
272	The Long March	Maoerhkai	0	0.00	1	1	0.00	14-Jul-35	14-Jul-35	NA	FOOT	NA
273	The Long March	Maoerhkai	0	0.00	1	1	0.00	15-Jul-35	15-Jul-35	NA	FOOT	NA
274	The Long March	Maoerhkai	0	0.00	1	1	0.00	16-Jul-35	16-Jul-35	NA	FOOT	NA
275	The Long March	Maoerhkai	0	0.00	1	1	0.00	17-Jul-35	17-Jul-35	NA	FOOT	NA
276	The Long March	Maoerhkai	0	0.00	1	1	0.00	18-Jul-35	18-Jul-35	NA	FOOT	NA
277	The Long March	Maoerhkai	0	0.00	1	1	0.00	19-Jul-35	19-Jul-35	NA	FOOT	NA
278	The Long March	Maoerhkai	0	0.00	1	1	0.00	20-Jul-35	20-Jul-35	NA	FOOT	NA
279	The Long March	Maoerhkai	0	0.00	1	1	0.00	21-Jul-35	21-Jul-35	NA	FOOT	NA
280	The Long March	Maoerhkai	0	0.00	1	1	0.00	22-Jul-35	22-Jul-35	NA	FOOT	NA
281	The Long March	Maoerhkai	0	0.00	1	1	0.00	23-Jul-35	23-Jul-35	NA	FOOT	NA
282	The Long March	Maoerhkai	0	0.00	1	1	0.00	24-Jul-35	24-Jul-35	NA	FOOT	NA
283	The Long March	Maoerhkai	0	0.00	1	1	0.00	25-Jul-35	25-Jul-35	NA	FOOT	NA
284	The Long March	Maoerhkai	0	0.00	1	1	0.00	26-Jul-35	26-Jul-35	NA	FOOT	NA
285	The Long March	Maoerhkai	0	0.00	1	1	0.00	27-Jul-35	27-Jul-35	NA	FOOT	NA
286	The Long March	Maoerhkai	0	0.00	1	1	0.00	28-Jul-35	28-Jul-35	NA	FOOT	NA
287	The Long March	Maoerhkai	15	24.14	1	1	24.14	29-Jul-35	29-Jul-35	NA	FOOT	NA
288	The Long March	Latzuling	18	28.97	1	1	28.97	30-Jul-35	30-Jul-35	NA	FOOT	NA
289	The Long March	Maoerhkai	0	0.00	1	1	0.00	31-Jul-35	31-Jul-35	NA	FOOT	NA
290	The Long March	Maoerhkai	23	37.01	1	1	37.01	01-Aug-35	01-Aug-35	NA	FOOT	NA
291	The Long March	Kaying	23	37.01	1	1	37.01	02-Aug-35	02-Aug-35	NA	FOOT	NA
292	The Long March	Hsiaolamassu	13	20.92	1	1	20.92	03-Aug-35	03-Aug-35	NA	FOOT	NA
293	The Long March	Polotzu	0	0.00	1	1	0.00	04-Aug-35	04-Aug-35	NA	FOOT	NA
294	The Long March	Polotzu	0	0.00	1	1	0.00	05-Aug-35	05-Aug-35	NA	FOOT	NA
295	The Long March	Polotzu	0	0.00	1	1	0.00	06-Aug-35	06-Aug-35	NA	FOOT	NA
296	The Long March	Polotzu	10	16.09	1	1	16.09	07-Aug-35	07-Aug-35	NA	FOOT	NA
297	The Long March	Heishuiho	0	0.00	1	1	0.00	08-Aug-35	08-Aug-35	NA	FOOT	NA
298	The Long March	Heishuiho	0	0.00	1	1	0.00	09-Aug-35	09-Aug-35	NA	FOOT	NA
299	The Long March	Heishuiho	0	0.00	1	1	0.00	10-Aug-35	10-Aug-35	NA	FOOT	NA
300	The Long March	Heishuiho	0	0.00	1	1	0.00	11-Aug-35	11-Aug-35	NA	FOOT	NA
301	The Long March	Heishuiho	0	0.00	1	1	0.00	12-Aug-35	12-Aug-35	NA	FOOT	NA
302	The Long March	Heishuiho	0	0.00	1	1	0.00	13-Aug-35	13-Aug-35	NA	FOOT	NA
303	The Long March	Heishuiho	0	0.00	1	1	0.00	14-Aug-35	14-Aug-35	NA	FOOT	NA
304	The Long March	Heishuiho	0	0.00	1	1	0.00	15-Aug-35	15-Aug-35	NA	FOOT	NA
305	The Long March	Heishuiho	0	0.00	1	1	0.00	16-Aug-35	16-Aug-35	NA	FOOT	NA
306	The Long March	Heishuiho	0	0.00	1	1	0.00	17-Aug-35	17-Aug-35	NA	FOOT	NA
307	The Long March	Heishuiho	23	37.01	1	1	37.01	18-Aug-35	18-Aug-35	NA	FOOT	NA
308	The Long March	Hsiaolamassu	23	37.01	1	1	37.01	19-Aug-35	19-Aug-35	NA	FOOT	NA
309	The Long March	Kaying	23	37.01	1	1	37.01	20-Aug-35	20-Aug-35	NA	FOOT	NA
310	The Long March	Maoerhkai	0	0.00	1	1	0.00	21-Aug-35	21-Aug-35	NA	FOOT	NA
311	The Long March	Maoerhkai	0	0.00	1	1	0.00	22-Aug-35	22-Aug-35	NA	FOOT	NA
312	The Long March	Maoerhkai	23	37.01	1	1	37.01	23-Aug-35	23-Aug-35	NA	FOOT	NA
313	The Long March	Latzuling	23	37.01	1	1	37.01	24-Aug-35	24-Aug-35	NA	FOOT	NA
314	The Long March	Fenshuiling	27	43.45	1	1	43.45	25-Aug-35	25-Aug-35	NA	FOOT	NA
315	The Long March	Houho	23	37.01	1	1	37.01	26-Aug-35	26-Aug-35	NA	FOOT	NA

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316	The Long March	Tatsooti	23	37.01	1	1	37.01	27-Aug-35	27-Aug-35	NA	FOOT	NA
317	The Long March	Hsiaoshenlin	17	27.36	1	1	27.36	28-Aug-35	28-Aug-35	NA	FOOT	NA
318	The Long March	Pahsi	7	11.27	1	1	11.27	29-Aug-35	29-Aug-35	NA	FOOT	NA
319	The Long March	Ahsi	0	0.00	1	1	0.00	30-Aug-35	30-Aug-35	NA	FOOT	NA
320	The Long March	Ahsi	0	0.00	1	1	0.00	31-Aug-35	31-Aug-35	NA	FOOT	NA
321	The Long March	Maolung	0	0.00	1	1	0.00	01-Sep-35	01-Sep-35	NA	FOOT	NA
322	The Long March	Maolung	20	32.19	1	1	32.19	02-Sep-35	02-Sep-35	NA	FOOT	NA
323	The Long March	Maolung	0	0.00	1	1	0.00	03-Sep-35	03-Sep-35	NA	FOOT	NA
324	The Long March	Maolung	0	0.00	1	1	0.00	04-Sep-35	04-Sep-35	NA	FOOT	NA
325	The Long March	Maolung	30	48.28	1	1	48.28	05-Sep-35	05-Sep-35	NA	FOOT	NA
326	The Long March	Ochieh	0	0.00	1	1	0.00	06-Sep-35	06-Sep-35	NA	FOOT	NA
327	The Long March	Ochieh	0	0.00	1	1	0.00	07-Sep-35	07-Sep-35	NA	FOOT	NA
328	The Long March	Ochieh	0	0.00	1	1	0.00	08-Sep-35	08-Sep-35	NA	FOOT	NA
329	The Long March	Ochieh	0	0.00	1	1	0.00	09-Sep-35	09-Sep-35	NA	FOOT	NA
330	The Long March	Ochieh	0	0.00	1	1	0.00	10-Sep-35	10-Sep-35	NA	FOOT	NA
331	The Long March	Ochieh	0	0.00	1	1	0.00	11-Sep-35	11-Sep-35	NA	FOOT	NA
332	The Long March	Ochieh	17	27.36	1	1	27.36	12-Sep-35	12-Sep-35	NA	FOOT	NA
333	The Long March	Chiaochissu	20	32.19	1	1	32.19	13-Sep-35	13-Sep-35	NA	FOOT	NA
334	The Long March	Manti	23	37.01	1	1	37.01	14-Sep-35	14-Sep-35	NA	FOOT	NA
335	The Long March	Watsangssu	13	20.92	1	1	20.92	15-Sep-35	15-Sep-35	NA	FOOT	NA
336	The Long March	Moya	23	37.01	1	1	37.01	16-Sep-35	16-Sep-35	NA	FOOT	NA
337	The Long March	Heila	30	48.28	1	1	48.28	17-Sep-35	17-Sep-35	NA	FOOT	NA
338	The Long March	Latzukou	40	64.37	1	1	64.37	18-Sep-35	18-Sep-35	NA	FOOT	NA
339	The Long March	Hsuanwo	12	19.31	1	1	19.31	19-Sep-35	19-Sep-35	NA	FOOT	NA
340	The Long March	Luyuanli	12	19.31	1	1	19.31	20-Sep-35	20-Sep-35	NA	FOOT	NA
341	The Long March	Hayuanpu	0	0.00	1	1	0.00	21-Sep-35	21-Sep-35	NA	FOOT	NA
342	The Long March	Hayuanpu	0	0.00	1	1	0.00	22-Sep-35	22-Sep-35	NA	FOOT	NA
343	The Long March	Hayuanpu	80	128.74	1	1	128.74	23-Sep-35	23-Sep-35	NA	FOOT	NA
344	The Long March	Luching	33	53.11	1	1	53.11	24-Sep-35	24-Sep-35	NA	FOOT	NA
345	The Long March	Hsinssu	17	27.36	1	1	27.36	25-Sep-35	25-Sep-35	NA	FOOT	NA
346	The Long March	Yuanyangchu	30	48.28	1	1	48.28	26-Sep-35	26-Sep-35	NA	FOOT	NA
347	The Long March	Panglochen	0	0.00	1	1	0.00	27-Sep-35	27-Sep-35	NA	FOOT	NA
348	The Long March	Panglochen	0	0.00	1	1	0.00	28-Sep-35	28-Sep-35	NA	FOOT	NA
349	The Long March	Panglochen	30	48.28	1	1	48.28	29-Sep-35	29-Sep-35	NA	FOOT	NA
350	The Long March	Tungwei	0	0.00	1	1	0.00	30-Sep-35	30-Sep-35	NA	FOOT	NA
351	The Long March	Tungwei	0	0.00	1	1	0.00	01-Oct-35	01-Oct-35	NA	FOOT	NA
352	The Long March	Tungwei	20	32.19	1	1	32.19	02-Oct-35	02-Oct-35	NA	FOOT	NA
353	The Long March	Ssutzuchuan	23	37.01	1	1	37.01	03-Oct-35	03-Oct-35	NA	FOOT	NA
354	The Long March	Hungchiatachuang	10	16.09	1	1	16.09	04-Oct-35	04-Oct-35	NA	FOOT	NA
355	The Long March	Kaochiapu	33	53.11	1	1	53.11	05-Oct-35	05-Oct-35	NA	FOOT	NA
356	The Long March	Changchiachi	23	37.01	1	1	37.01	06-Oct-35	06-Oct-35	NA	FOOT	NA
357	The Long March	Changyipu	23	37.01	1	1	37.01	07-Oct-35	07-Oct-35	NA	FOOT	NA
358	The Long March	Naichiaho	23	37.01	1	1	37.01	08-Oct-35	08-Oct-35	NA	FOOT	NA
359	The Long March	Puchihiyao	30	48.28	1	1	48.28	09-Oct-35	09-Oct-35	NA	FOOT	NA
360	The Long March	Chenchiawan	30	48.28	1	1	48.28	10-Oct-35	10-Oct-35	NA	FOOT	NA

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361	The Long March	Sancha	17	27.36	1	1	27.36	11-Oct-35	11-Oct-35	NA	FOOT	NA
362	The Long March	Suchiawan	33	53.11	1	1	53.11	12-Oct-35	12-Oct-35	NA	FOOT	NA
363	The Long March	Maochiachuan	23	37.01	1	1	37.01	13-Oct-35	13-Oct-35	NA	FOOT	NA
364	The Long March	Chenchiawan	30	48.28	1	1	48.28	14-Oct-35	14-Oct-35	NA	FOOT	NA
365	The Long March	Hungtechen	15	24.14	1	1	24.14	15-Oct-35	15-Oct-35	NA	FOOT	NA
366	The Long March	Kungchiawan	20	32.19	1	1	32.19	16-Oct-35	16-Oct-35	NA	FOOT	NA
367	The Long March	Mukuachen	20	32.19	1	1	32.19	17-Oct-35	17-Oct-35	NA	FOOT	NA
368	The Long March	Tsochiayaoshan	20	32.19	1	1	32.19	18-Oct-35	18-Oct-35	NA	FOOT	NA
369	The Long March	Tiehpienchen	20	32.19	1	1	32.19	19-Oct-35	19-Oct-35	NA	FOOT	NA
370	The Long March	Wuchichen	0	0.00	1	1	0.00	20-Oct-35	20-Oct-35	NA	FOOT	NA
371	The Long March	Wuchichen-Tangerhuan	13	20.92	1	1	20.92	21-Oct-35	21-Oct-35	NA	FOOT	NA

NO.	VEGETATION	FOOTING	FORCE	SIZE	NOTES
1	NA				CORPS App. B
2	NA				CORPS App. B
3	NA				CORPS App. B
4	NA				CORPS App. B
5	NA				CORPS App. B
6	NA				CORPS App. B
7	NA				CORPS App. B
8	NA				CORPS App. B
9	NA				CORPS App. B
10	NA				CORPS App. B
11	NA				CORPS App. B
12	NA				CORPS App. B
13	NA				CORPS App. B
14	NA				CORPS App. B
15	NA				CORPS App. B
16	NA				CORPS App. B
17	NA				CORPS App. B
18	NA				CORPS App. B
19	NA				CORPS App. B
20	NA				CORPS App. B
21	NA				CORPS App. B
22	NA				CORPS App. B
23	NA				CORPS App. B
24	NA				CORPS App. B
25	NA				CORPS App. B
26	NA				CORPS App. B
27	NA				CORPS App. B
28	NA				CORPS App. B
29	NA				CORPS App. B
30	NA				CORPS App. B
31	NA				CORPS App. B
32	NA				CORPS App. B
33	NA				CORPS App. B
34	NA				CORPS App. B
35	NA				CORPS App. B
36	NA				CORPS App. B
37	NA				CORPS App. B
38	NA				CORPS App. B
39	NA				CORPS App. B
40	NA				CORPS App. B
41	NA				CORPS App. B
42	NA				CORPS App. B
43	NA				CORPS App. B
44	NA				CORPS App. B
45	NA				CORPS App. B

LONGMARX

NO.	VEGETATION	FOOTING	FORCE	SIZE	NOTES
46	NA	NA	CORPS	App. B	
47	NA	NA	NA	App. B	
48	NA	NA	NA	App. B	
49	NA	NA	NA	App. B	
50	NA	NA	NA	App. B	
51	NA	NA	NA	App. B	
52	NA	NA	NA	App. B	
53	NA	NA	NA	App. B	
54	NA	NA	NA	App. B	
55	NA	NA	NA	App. B	
56	NA	NA	NA	App. B	
57	NA	NA	NA	App. B	
58	NA	NA	NA	App. B	
59	NA	NA	NA	App. B	
60	NA	NA	NA	App. B	
61	NA	NA	NA	App. B	
62	NA	NA	NA	App. B	
63	NA	NA	NA	App. B	
64	NA	NA	NA	App. B	
65	NA	NA	NA	App. B	
66	NA	NA	NA	App. B	
67	NA	NA	NA	App. B	
68	NA	NA	NA	App. B	
69	NA	NA	NA	App. B	
70	NA	NA	NA	App. B	
71	NA	NA	NA	App. B	
72	NA	NA	NA	App. B	
73	NA	NA	NA	App. B	
74	NA	NA	NA	App. B	
75	NA	NA	NA	App. B	
76	NA	NA	NA	App. B	
77	NA	NA	NA	App. B	
78	NA	NA	NA	App. B	
79	NA	NA	NA	App. B	
80	NA	NA	NA	App. B	
81	NA	NA	NA	App. B	
82	NA	NA	NA	App. B	
83	NA	NA	NA	App. B	
84	NA	NA	NA	App. B	
85	NA	NA	NA	App. B	
86	NA	NA	NA	App. B	
87	NA	NA	NA	App. B	
88	NA	NA	NA	App. B	
89	NA	NA	NA	App. B	
90	NA	NA	NA	App. B	

LONGHARX

NO.	VEGETATION	FOOTING	FORCE	SIZE	NOTES
91	NA	NA	NA	App. B	
92	NA	NA	NA	App. B	
93	NA	NA	NA	App. B	
94	NA	NA	NA	App. B	
95	NA	NA	NA	App. B	
96	NA	NA	NA	App. B	
97	NA	NA	NA	App. B	
98	NA	NA	NA	App. B	
99	NA	NA	NA	App. B	
100	NA	NA	NA	App. B	
101	NA	NA	NA	App. B	
102	NA	NA	NA	App. B	
103	NA	NA	NA	App. B	
104	NA	NA	NA	App. B	
105	NA	NA	NA	App. B	
106	NA	NA	NA	App. B	
107	NA	NA	NA	App. B	
108	NA	NA	NA	App. B	
109	NA	NA	NA	App. B	
110	NA	NA	NA	App. B	
111	NA	NA	NA	App. B	
112	NA	NA	NA	App. B	
113	NA	NA	NA	App. B	
114	NA	NA	NA	App. B	
115	NA	NA	NA	App. B	
116	NA	NA	NA	App. B	
117	NA	NA	NA	App. B	
118	NA	NA	NA	App. B	
119	NA	NA	NA	App. B	
120	NA	NA	NA	App. B	
121	NA	NA	NA	App. B	
122	NA	NA	NA	App. B	
123	NA	NA	NA	App. B	
124	NA	NA	NA	App. B	
125	NA	NA	NA	App. B	
126	NA	NA	NA	App. B	
127	NA	NA	NA	App. B	
128	NA	NA	NA	App. B	
129	NA	NA	NA	App. B	
130	NA	NA	NA	App. B	
131	NA	NA	NA	App. B	
132	NA	NA	NA	App. B	
133	NA	NA	NA	App. B	
134	NA	NA	NA	App. B	
135	NA	NA	NA	App. B	

LONGMARX

NO.	VEGETATION	FOOTING	FORCE	SIZE	NOTES
136	NA	NA	NA	App. B	
137	NA	NA	NA	App. B	
138	NA	NA	NA	App. B	
139	NA	NA	NA	App. B	
140	NA	NA	NA	App. B	
141	NA	NA	NA	App. B	
142	NA	NA	NA	App. B	
143	NA	NA	NA	App. B	
144	NA	NA	NA	App. B	
145	NA	NA	NA	App. B	
146	NA	NA	NA	App. B	
147	NA	NA	NA	App. B	
148	NA	NA	NA	App. B	
149	NA	NA	NA	App. B	
150	NA	NA	NA	App. B	
151	NA	NA	NA	App. B	
152	NA	NA	NA	App. B	
153	NA	NA	NA	App. B	
154	NA	NA	NA	App. B	
155	NA	NA	NA	App. B	
156	NA	NA	NA	App. B	
157	NA	NA	NA	App. B	
158	NA	NA	NA	App. B	
159	NA	NA	NA	App. B	
160	NA	NA	NA	App. B	
161	NA	NA	NA	App. B	
162	NA	NA	NA	App. B	
163	NA	NA	NA	App. B	
164	NA	NA	NA	App. B	
165	NA	NA	NA	App. B	
166	NA	NA	NA	App. B	
167	NA	NA	NA	App. B	
168	NA	NA	NA	App. B	
169	NA	NA	NA	App. B	
170	NA	NA	NA	App. B	
171	NA	NA	NA	App. B	
172	NA	NA	NA	App. B	
173	NA	NA	NA	App. B	
174	NA	NA	NA	App. B	
175	NA	NA	NA	App. B	
176	NA	NA	NA	App. B	
177	NA	NA	NA	App. B	
178	NA	NA	NA	App. B	
179	NA	NA	NA	App. B	
180	NA	NA	NA	App. B	

PART 14 OF 18

LONGMARX

NO.	VEGETATION	FOOTING	FORCE	SIZE	NOTES
181	NA	NA	NA	App. B	
182	NA	NA	NA	App. B	
183	NA	NA	NA	App. B	
184	NA	NA	NA	App. B	
185	NA	NA	NA	App. B	
186	NA	NA	NA	App. B	
187	NA	NA	NA	App. B	
188	NA	NA	NA	App. B	
189	NA	NA	NA	App. B	
190	NA	NA	NA	App. B	
191	NA	NA	NA	App. B	
192	NA	NA	NA	App. B	
193	NA	NA	NA	App. B	
194	NA	NA	NA	App. B	
195	NA	NA	NA	App. B	
196	NA	NA	NA	App. B	
197	NA	NA	NA	App. B	
198	NA	NA	NA	App. B	
199	NA	NA	NA	App. B	
200	NA	NA	NA	App. B	
201	NA	NA	NA	App. B	
202	NA	NA	NA	App. B	
203	NA	NA	NA	App. B	
204	NA	NA	NA	App. B	
205	NA	NA	NA	App. B	
206	NA	NA	NA	App. B	
207	NA	NA	NA	App. B	
208	NA	NA	NA	App. B	
209	NA	NA	NA	App. B	
210	NA	NA	NA	App. B	
211	NA	NA	NA	App. B	
212	NA	NA	NA	App. B	
213	NA	NA	NA	App. B	
214	NA	NA	NA	App. B	
215	NA	NA	NA	App. B	
216	NA	NA	NA	App. B	
217	NA	NA	NA	App. B	
218	NA	NA	NA	App. B	
219	NA	NA	NA	App. B	
220	NA	NA	NA	App. B	
221	NA	NA	NA	App. B	
222	NA	NA	NA	App. B	
223	NA	NA	NA	App. B	
224	NA	NA	NA	App. B	
225	NA	NA	NA	App. B	

LONGMARX

NO.	VEGETATION	FOOTING	FORCE	SIZE	NOTES
226	NA	NA	NA	App. B	
227	NA	NA	NA	App. B	
228	NA	NA	NA	App. B	
229	NA	NA	NA	App. B	
230	NA	NA	NA	App. B	
231	NA	NA	NA	App. B	
232	NA	NA	NA	App. B	
233	NA	NA	NA	App. B	
234	NA	NA	NA	App. B	
235	NA	NA	NA	App. B	
236	NA	NA	NA	App. B	
237	NA	NA	NA	App. B	
238	NA	NA	NA	App. B	
239	NA	NA	NA	App. B	
240	NA	NA	NA	App. B	
241	NA	NA	NA	App. B	
242	NA	NA	NA	App. B	
243	NA	NA	NA	App. B	
244	NA	NA	NA	App. B	
245	NA	NA	NA	App. B	
246	NA	NA	NA	App. B	
247	NA	NA	NA	App. B	
248	NA	NA	NA	App. B	
249	NA	NA	NA	App. B	
250	NA	NA	NA	App. B	
251	NA	NA	NA	App. B	
252	NA	NA	NA	App. B	
253	NA	NA	NA	App. B	
254	NA	NA	NA	App. B	
255	NA	NA	NA	App. B	
256	NA	NA	NA	App. B	
257	NA	NA	NA	App. B	
258	NA	NA	NA	App. B	
259	NA	NA	NA	App. B	
260	NA	NA	NA	App. B	
261	NA	NA	NA	App. B	
262	NA	NA	NA	App. B	
263	NA	NA	NA	App. B	
264	NA	NA	NA	App. B	
265	NA	NA	NA	App. B	
266	NA	NA	NA	App. B	
267	NA	NA	NA	App. B	
268	NA	NA	NA	App. B	
269	NA	NA	NA	App. B	
270	NA	NA	NA	App. B	

PART 16 OF 18

LONGMARX

NO.	VEGETATION	FOOTING	FORCE	SIZE	NOTES
271	NA	NA	NA	App. B	
272	NA	NA	NA	App. B	
273	NA	NA	NA	App. B	
274	NA	NA	NA	App. B	
275	NA	NA	NA	App. B	
276	NA	NA	NA	App. B	
277	NA	NA	NA	App. B	
278	NA	NA	NA	App. B	
279	NA	NA	NA	App. B	
280	NA	NA	NA	App. B	
281	NA	NA	NA	App. B	
282	NA	NA	NA	App. B	
283	NA	NA	NA	App. B	
284	NA	NA	NA	App. B	
285	NA	NA	NA	App. B	
286	NA	NA	NA	App. B	
287	NA	NA	NA	App. B	
288	NA	NA	NA	App. B	
289	NA	NA	NA	App. B	
290	NA	NA	NA	App. B	
291	NA	NA	NA	App. B	
292	NA	NA	NA	App. B	
293	NA	NA	NA	App. B	
294	NA	NA	NA	App. B	
295	NA	NA	NA	App. B	
296	NA	NA	NA	App. B	
297	NA	NA	NA	App. B	
298	NA	NA	NA	App. B	
299	NA	NA	NA	App. B	
300	NA	NA	NA	App. B	
301	NA	NA	NA	App. B	
302	NA	NA	NA	App. B	
303	NA	NA	NA	App. B	
304	NA	NA	NA	App. B	
305	NA	NA	NA	App. B	
306	NA	NA	NA	App. B	
307	NA	NA	NA	App. B	
308	NA	NA	NA	App. B	
309	NA	NA	NA	App. B	
310	NA	NA	NA	App. B	
311	NA	NA	NA	App. B	
312	NA	NA	NA	App. B	
313	NA	NA	NA	App. B	
314	NA	NA	NA	App. B	
315	NA	NA	NA	App. B	

LONGMARX

NO.	VEGETATION	FOOTING	FORCE	SIZE	NOTES
316	NA	NA	NA	App. B	
317	NA	NA	NA	App. B	
318	NA	NA	NA	App. B	
319	NA	NA	NA	App. B	
320	NA	NA	NA	App. B	
321	NA	NA	8DE	App. B	
322	NA	NA	8DE	App. B	
323	NA	NA	8DE	App. B	
324	NA	NA	8DE	App. B	
325	NA	NA	8DE	App. B	
326	NA	NA	8DE	App. B	
327	NA	NA	8DE	App. B	
328	NA	NA	8DE	App. B	
329	NA	NA	8DE	App. B	
330	NA	NA	8DE	App. B	
331	NA	NA	8DE	App. B	
332	NA	NA	8DE	App. B	
333	NA	NA	8DE	App. B	
334	NA	NA	8DE	App. B	
335	NA	NA	8DE	App. B	
336	NA	NA	8DE	App. B	
337	NA	NA	8DE	App. B	
338	NA	NA	8DE	App. B	
339	NA	NA	8DE	App. B	
340	NA	NA	8DE	App. B	
341	NA	NA	8DE	App. B	
342	NA	NA	8DE	App. B	
343	NA	NA	8DE	App. B	
344	NA	NA	8DE	App. B	
345	NA	NA	8DE	App. B	
346	NA	NA	8DE	App. B	
347	NA	NA	8DE	App. B	
348	NA	NA	8DE	App. B	
349	NA	NA	8DE	App. B	
350	NA	NA	8DE	App. B	
351	NA	NA	8DE	App. B	
352	NA	NA	8DE	App. B	
353	NA	NA	8DE	App. B	
354	NA	NA	8DE	App. B	
355	NA	NA	8DE	App. B	
356	NA	NA	8DE	App. B	
357	NA	NA	8DE	App. B	
358	NA	NA	8DE	App. B	
359	NA	NA	8DE	App. B	
360	NA	NA	8DE	App. B	

PART 18 OF 18

LONGMARX

NO.	VEGETATION	FOOTING	FORCE	SIZE	NOTES
361	NA	NA	BDE	App. 8	
362	NA	NA	BDE	App. 8	
363	NA	NA	BDE	App. 8	
364	NA	NA	BDE	App. 8	
365	NA	NA	BDE	App. 8	
366	NA	NA	BDE	App. 8	
367	NA	NA	BDE	App. 8	
368	NA	NA	BDE	App. 8	
369	NA	NA	BDE	App. 8	
370	NA	NA	BDE	App. 8	
371	NA	NA	BDE	App. 8	

MISCROAD

1. Data Source:
 - a. Title: Various
 - b. Author: Various
 - c. Date: Various
 - d. Organization: Various
 - e. Number: NA
 - f. Available from: Various
2. Data Description: The MISCROAD (MISCellaneous Rate Of Advance Data base) data base contains short data sets gleaned from a variety of sources. It consolidates them to avoid creating a multiplicity of separate data bases for each of these sources. The data source reference citations are listed in the Data Table Notes paragraph below.
3. Discussion and Comments:
 - a. For the most part, these are advances by forces that are unopposed or just lightly engaged.
 - b. Appendix B gives some supplemental material.
4. Data Table Notes: The reference citations and notes indicated by the column headed "REFERENCE NUMBERS" are listed below.

Ref.

no.Reference citation or note

1. Newark, Peter, "Cowboys," Simon & Schuster, NY, 1983.
2. "Determination of the Relation Between Mobility and Combat Effectiveness by Historical Analysis," Vol IV of "Fundamental Relations in Army Mobility Systems," RAC-TP-266, Research Analysis Corporation, McLean, VA, February 1968.
3. Personal communication by member of 42d Commandos.
4. Severin, Tim, "Retracing the First Crusade," National Geographic, 176(1989), 3(Sep), 326-365.
5. Falk, Stanley L., "Bataan: The March of Death," W. W. Norton & Co. Inc., New York, 1962.
6. "Historical Atlas of the World," Barnes & Noble Books, NY, 1972; "The Times Concise Atlas of World History," Times Books, London, 1982 ; "The New Encyclopedia Britannica," 15th Edition, Macropedia Vol 8, pp 373-376, Encyclopedia Britannica, Chicago, 1974.
7. "Physical Readiness Training," FM 21-20. C2, Dept. of the Army, 8 April 1983. 2-mile run for men 40-45 years of age.
8. Utley, Robert M., and Wilcomb E. Washburn, "The American Heritage History of the Indian Wars," American Heritage Publishing Co, 1977.
9. Anonymous, Indiana Military History Journal, 11(1986), 2(May), 9-21 .
10. Fager, Charles E., "Selma, 1965: The March That Changed the South," Beacon Press, Boston, 1974 (2nd Ed., 1985).

11. Heller, Charles E. and William A. Stofft (Eds), "America's First Battles: 1776-1965," University Press of Kansas, 1986.
12. Encyclopedia Britannica, Macropedia, Vol 16, article on "Shaka," states that "An impi (zulu regiment) consistently covered 50 miles a day, living off grain and cattle requisitioned from the kraals it passed, and accompanied by boys who carried the warrior's sleeping mats and cooking pots."
13. Douglas, Henry Kyd, "I Rode With Stonewall," University of North Carolina Press. Chapel Hill, NC, 1940.
14. Eggenberger, "A Dictionary of Battles," Thomas Y. Crowell Co., New York, 1967.
15. "World at War" TV Documentary.
16. Sears, Stephen W., "The Landscape Turned Red: The Battle of Antietam," Ticknor & Fields, New Haven & New York, 1983.
17. Dodge, Theodore Ayrault, "Napoleon: A History of the Art of War from Lutzen to Waterloo," AMS Press, New York, 1970 (reprinted from the 1904-1907 edition).
18. The Washington Post, 16 November 1986.
19. "The Forty-Niners," Time-Life Books, New York, 1974.
20. Lavender, David, "Westward Vision: The Story of the Oregon Trail," McGraw-Hill. New York, 1963.
21. "Columbia Encyclopedia," 3rd Ed, Columbia University Press, New York, 1968 (9th printing).
22. Encyclopaedia Britannica (15th Ed), Helen Benton, Publisher, Chicago, IL, 1974.
23. "Encyclopedia Americana," International Edition, Americana Corporation, Danbury, CT, 1978.
24. "Dictionary of American History: Revised Edition," Charles Scribner's Sons, New York, 1976 (reissue of 1940 edition).
25. Snyder, Gerald S., "In the Footsteps of Lewis and Clark," National Geographic Society, Washington, DC, 1970.
26. Moody, Ralph, "Stagecoach West," Thomas Y. Crowell Co., 1967.
27. Via Springfield, MS; Fort Smith, AK; Abilene, TX; El Paso, TX; Las Cruces, NM; Tucson, AZ; Mexicali, MX; Los Angeles, CA; Fresno, CA; San Jose, CA; San Francisco, CA.
28. On the Butterfield Line, mail "very seldom failed to go through well inside the 25-day limit (set by contract)," regardless of weather. Stages ran "almost with the regularity of a railroad, and most trips were made in 24 days or less."
29. Flavius Vegetius Renatus (Vegetius), "Military Institutions of the Romans," Stackpole Books, Harrisburg, PA 1944 (reprinted by The Telegraph Press, Harrisburg, PA, July 1965). This states in part that "It was a common custom among the old Romans ... to exercise both cavalry and infantry three times a month by marches of a certain length. The foot were obliged to march completely armed a distance ten miles from the camp and return, in the most exact order and with the military step which they changed and quickened on some part of the march. ... They made these marches not only on even ground, but both cavalry and infantry were ordered into difficult and broken terrain and to ascend or descend mountains ... They should march with the common military step twenty miles in five summer hours (about half a summer's day). and with the full step, which is quicker, twenty-four miles in the same number of hours.

If they exceed this pace they can no longer march but run ... Recruits in particular should be obliged frequently to carry a weight of not less than sixty pounds (exclusive of their arms), and to march with it in the ranks."

30. Stuart, MAJ H. Paul, "Operational Maneuver: Creator of the Decisive Point," USAC&GSC Thesis, 1 May 1987. AD-A185 078.
31. Snodgrass, LTC James G., "Operational Maneuver: From the American Civil War to the OMG—What Are Its Origins and Will It Work Today?", USAC&GSC Thesis. 26 February 1988. AD-A196 036.
32. "Historical Data on Speeds of March," TRADOC Historical Office, HQ, TRADOC. October 1976.
33. Reznichenko, Vasiliy Gerasimov, et al, "Tactics," Voenizdat 1987.
34. Gribling, MAJ Richard H., "Soviet Attack Tempo: The Linchpin in Soviet Maneuver Doctrine," USAC&GSC Thesis, 9 March 1988. AD-A192 586.
35. Jones, James Pickett, "Yankee Blitzkrieg: Wilson's Raid Through Alabama and Georgia," Univ. of Georgia Press, Athens, GA, 1976.

NO.	SHORT DESCRIPTION	ROUTE, LOCALE, SECTOR, OR OTHER INFORMATION	DISTANCE (VALUE)	DIST UNITS	DISTANCE (KM)	TIME (VALUE)	TIME UNITS	TIME (DAYS)	RATE (KM/DAY)	START DATE-1
1	Western Cattle Drives	San Antonio, TX to Abilene, KS	718	miles	1155.51	3	months	91	12.70	1867
2	Western Cattle Drives	Fort Worth, TX to Virginia City, MT	1500	miles	2414.02	6	months	183	13.19	NA
3	Gen Allenby	Approach to Megiddo	550	miles	885.14	38	days	38	23.29	1918
4	Falklands War	Port San Carlos to Port Stanley, E Falklands Is	80	miles	128.75	3	days	3	42.92	Jun 1982
5	First Crusade	Across Europe, Peter the Hermit's peasants	NA	NA	NA	NA	NA	NA	28.97	NA
6	First Crusade	Across Europe, Godfrey's army	NA	NA	NA	NA	NA	NA	24.94	NA
7	Bataan Death March	Mariveles to Balanga	25	miles	40.23	NA	NA	NA	NA	09-Apr-42
8	Bataan Death March	Balanga to San Fernando	31	miles	49.89	NA	NA	NA	NA	NA
9	Bataan Death March	San Fernando to Capas	25	miles	40.23	NA	NA	NA	NA	NA
10	Bataan Death March	Capas to Camp O'Donnell	9	miles	14.48	NA	NA	NA	NA	NA
11	Bataan Death March	Mariveles to Camp O'Donnell	90	miles	144.84	NA	NA	NA	NA	09-Apr-42
12	Japanese Trng March	NA	56	miles	90.12	29	hours	1.208	74.58	NA
13	Geneva Convention	Normal day's march for prisoners	NU	NU	20.00	1	day	1	20.00	NA
14	Alexander the Great	Macedonia to Issus	1500	miles	2414.02	18	months	548	4.41	334 BC
15	Alexander the Great	Issus to Memphis	1625	miles	2615.18	13	months	396	6.60	333 BC
16	Alexander the Great	Memphis to Gaugamela	1150	miles	1850.75	9	months	274	6.75	331 BC
17	Alexander the Great	Gaugamela to Persepolis	1000	miles	1609.34	6	months	183	8.79	331 BC
18	Alexander the Great	Persepolis to Hyphasis R.	4500	miles	7242.05	18	months	548	13.22	330 BC
19	Alexander the Great	Hydaspes to Susa	2500	miles	4023.36	7	months	213	18.89	324 BC
20	Physical Fitness Test	FM 21-20, C2, 8 April 1983	2	miles	3.22	20	minutes	0.014	231.75	NA
21	Physical Fitness Test	FM 21-20, C2, 8 April 1983	2	miles	3.22	29	minutes	0.02	159.82	NA
22	Pursuit of Nez Perce	Whitebird to Bear Paw Mountains	1700	miles	2735.88	92	days	92	29.74	17-Jun-1877
23	US Army Motor Convoy	Washington, DC to Presidio of San Francisco	3251	miles	5231.98	62	days	62	84.39	07-Jul-19
24	Civil Rights March	Selma, AL to Montgomery, AL	50	miles	80.47	5	days	5	16.09	21-Mar-65
25	US Training March	41st National Guard Division in Australia, WWII	90	miles	144.84	3	days	3	48.28	NA
26	Zulu impi	Zululand, early 1800's	50	miles	80.47	1	day	1	80.47	1800
27	Stonewall Jackson	Winchester to Paris and on to Piedmont, VA	23	miles	37.01	1.4	days	1.4	26.44	1860's
28	Stonewall Jackson	From Mount Jackson thru Shenandoah Valley	25	miles	40.23	1	days	1	40.23	1860's
29	Henry Kyd Douglas	Across Blue Ridge Mountains	105	miles	168.98	20	hours	0.833	202.78	1860's
30	Stonewall Jackson	Conrad's Store to Port Republic	16	miles	25.75	2.5	days	2.5	10.30	1860's
31	Stonewall Jackson	Vic. Loudon Heights to Vic. Kernstown	35	miles	56.33	1	days	1	56.33	1860's
32	Stonewall Jackson	Valley Campaign	400	miles	643.74	30	days	30	21.46	1860's
33	A. P. Hill	Harper's Ferry to Antietam	17	miles	27.36	8	hours	0.333	82.08	1860's
34	Stonewall Jackson	Spotsylvania County, VA	15	miles	24.14	1	days	1	24.14	5-Jun-1863
35	Stonewall Jackson	Across Rapidan R.	10	miles	16.09	1	days	1	16.09	6-Jun-1863
36	Stonewall Jackson		17	miles	27.36	1	days	1	27.36	7-Jun-1863
37	Stonewall Jackson		0	miles	0.00	1	days	1	0.00	8-Jun-1863
38	Stonewall Jackson		10	miles	16.09	1	days	1	16.09	9-Jun-1863
39	Stonewall Jackson	To Gaines Cross Roads	18	miles	28.97	1	days	1	28.97	10-Jun-1863
40	Stonewall Jackson	To vic. Cedarville	18	miles	28.97	1	days	1	28.97	11-Jun-1863
41	Stonewall Jackson	Spotsylvania Cty to Cedarville	88	miles	141.62	7	days	7	20.23	5-Jun-1863
42	Stonewall Jackson	Gen Early's march to Charlottesville	80	miles	128.75	4	days	4	32.19	1860's
43	1 Corps	Masurian Lakes I	77	miles	123.92	4	days	4	30.98	Sep-1914
44	Retreating forces	Masurian Lakes I	55	miles	88.51	1.047	days	1.042	84.97	Sep-1914
45	Lodz	German 9th Army (Gen. Mackensen)	50	miles	80.47	4	days	4	20.12	11-Nov-14

MISCROAD

NO.	SHORT DESCRIPTION	ROUTE, LOCALE, SECTOR, OR OTHER INFORMATION	DISTANCE (VALUE)	DIST UNITS	DISTANCE (KM)	TIME (VALUE)	TIME UNITS	TIME (DAYS)	RATE (KM/DAY)	START DATE-1
46	Lodz	Russian Fifth Army	70 miles	miles	112.65	48 hours	2	56.33	16-Nov-14	
47	Fall of Poland	German advance through Poland	35 miles	miles	56.33	1 days	1	56.33	1939	
48	Humphrey's Division	Vic. Frederick, MD to vic. Sharpsburg, MD	23 miles	miles	37.01	19 hours	0.792	46.76	16-Sep-1862	
49	Average day's march	French Army Corps	15.5 miles	miles	24.94	1 days	1	24.94	1796	
50	Average day's march	French Army Corps	10.6 miles	miles	17.06	1 days	1	17.06	1800	
51	Average day's march	French Army Corps	16.1 miles	miles	25.91	1 days	1	25.91	1805	
52	Average day's march	French Army Corps	15.5 miles	miles	24.94	1 days	1	24.94	1806	
57	Average day's march	French Army Corps	13.7 miles	miles	22.05	1 days	1	22.05	1815	
54	Great Peace March	Los Angeles to Washington, DC	3700 miles	miles	5954.57	260 days	260	22.90	01-Mar-86	
55	Covered wagon	From St. Joseph, MO to Carson Pass, CA	NU	miles	2250.00	99 days	99	22.73	30-Apr-1849	
56	Covered wagon	Nominal rate on the Oregon Trail	20 miles	miles	32.19	1 days	1	32.19	1830	
57	Covered wagon	Nominal rate on the Oregon Trail	17.5 miles	miles	28.16	1 days	1	28.16	1843	
58	Covered wagon	Oregon Trail	100 miles	miles	160.93	14 days	14	11.50	1844	
59	Covered wagon	Laramie Mountains, along Oregon Trail	NA	miles	NA	NA	NA	22.50	1844	
60	Covered wagon	Oregon Trail	NA	miles	NA	NA	NA	22.00	1844	
61	Covered wagon	Oregon Trail (Independence to Willamette Valley)	2000 miles	miles	3218.69	183 days	183	17.59	NA	
62	Covered wagon	Mormon Trail	1100 miles	miles	1770.28	101 days	101	17.53	1847	
63	Pony Express	St. Joseph, MO to Sacramento, CA	1966 miles	miles	3163.97	10 days	10	316.40	1860	
64	Pony Express	St. Joseph, MO to Sacramento, CA	1966 miles	miles	3163.97	NU	NU	400.00	1860	
65	Lewis and Clark	St. Louis to Vancouver and back	5500 miles	miles	8851.39	863 days	863	10.26	14-May-1804	
66	Lewis and Clark	St. Louis to Vancouver and back	5500 miles	miles	8851.39	730 days	730	12.13	14-May-1804	
67	Stagecoach	London to Edinburgh	400 miles	miles	643.74	11 days	11	58.52	1790	
68	Stagecoach	St. Louis, MO to California Gold Strike	2500 miles	miles	4023.36	70 days	70	57.48	1849	
69	Stagecoach	Vicinity of Fort Kearney, KS	300 miles	miles	482.80	30 days	30	16.09	10-Jun-1849	
70	Stagecoach	Stockton, CA to Stanislaus, CA	NA	miles	NA	1 days	1	NA	1849	
71	Stagecoach	San Francisco,CA to San Jose, CA	50 miles	miles	80.47	9 hours	0.375	214.58	Fall 1849	
72	Stagecoach	San Jose, CA to Monterey, CA	80 miles	miles	128.75	1 days	1	128.75	July 1851	
73	Stagecoach	Sacramento, CA to Nevada City, NV	65 miles	miles	104.61	12 hours	0.5	209.21	1850	
74	Stagecoach	Shasta, CA to Colusa, CA Race	160 miles	miles	257.50	11.5 hours	0.479	537.38	1853	
75	Stagecoach	Los Angeles, CA to Kernville, CA	125 miles	miles	201.17	1 days	1	201.17	1854	
76	Stagecoach	Cimarron River, KS to Wagon Mound	50 miles	miles	80.47	1 days	1	80.47	NA	
77	Stagecoach	Wagon Mound to Fort Union	25 miles	miles	40.23	2 days	2	20.12	NA	
78	Stagecoach	Independence, MO to Santa Fe, NM	860 miles	miles	1384.04	25 days	25	53.23	1-Nov-1853	
79	Stagecoach	Santa Fe Trail	860 miles	miles	1384.04	22.5 days	22.5	61.51	1855	
80	Stagecoach	Kansas City, KS to Santa Fe, NM	650 miles	miles	1046.07	14 days	14	74.72	NA	
81	Stagecoach	Independence, MO to Salt Lake City, UT	1400 miles	miles	2253.08	30 days	30	75.10	1850	
82	Stagecoach	Sacramento, CA to Salt Lake City, UT	910 miles	miles	1464.50	36 days	36	40.68	NA	
83	Stagecoach	St. Louis, MO to Sacramento, CA	3000 miles	miles	4828.03	25 days	25	193.12	NA	
84	Stagecoach	San Antonio, TX to San Diego, CA	1475 miles	miles	2373.78	30 days	30	79.13	NA	
85	Stagecoach	San Diego, CA to Tucson, AZ	475 miles	miles	764.44	23 days	23	33.24	1857	
86	Stagecoach	San Diego, CA to Tucson, AZ	NU	miles	NU	NU	NU	20.00	NA	
87	Stagecoach	San Diego, CA to San Antonio, TX	1475 miles	miles	2373.78	27 days	27	87.92	NA	
88	Stagecoach	Salt Lake City, UT to Placerville, CA	500 miles	miles	804.67	12 days	12	67.06	1858	
89	Stagecoach	Stockton, CA to Fort Tejon, CA	261 miles	miles	420.04	NU	NU	43.45	1857	
90	Stagecoach	Placerville, CA to Genoa, NV	80 miles	miles	128.75	1 days	1	128.75	1858	

MISCROAD

CAA-RP-90-04

NO.	SHORT DESCRIPTION	ROUTE, LOCALE, SECTOR, OR OTHER INFORMATION	DISTANCE (VALUE)	DIST UNITS	DISTANCE (KM)	TIME (VALUE)	TIME UNITS	TIME (DAYS)	RATE (KM/DAY)	START DATE-1
91	Stagecoach	Butterfield Line	2800	miles	4506.16	25	days	25	180.25	NA
92	Stagecoach	Out of St. Louis, MO	150	miles	241.40	1	days	1	241.40	Fall 1858
93	Stagecoach	Across Oklahoma Indian Territory	NU	miles	NU	NU	days	NU	270.00	Fall 1858
94	Stagecoach	Texas, Near El Paso	NU	miles	NU	NU	days	NU	116.00	Fall 1858
95	Stagecoach	New Mexico & Arizona--Through Apache Territory	160	miles	257.50	27	hours	1.125	228.88	Fall 1858
96	Stagecoach	Los Angeles, CA to Visalia, CA	132	miles	212.43	20	hours	0.833	254.92	Fall 1858
97	Stagecoach	To Diablo Mountain, CA	42	miles	67.59	3.62	hours	0.151	448.13	Fall 1858
98	Stagecoach	After Diablo Mountain, CA	12	miles	19.31	65	mins	0.045	427.84	Fall 1858
99	Stagecoach	To Gilroy	20	miles	32.19	2	hours	0.083	386.24	Fall 1858
100	Stagecoach	St. Louis, MO to San Francisco, CA	2800	miles	4506.16	24	days	24	187.76	Fall 1858
101	Stagecoach	Leavenworth, KS to Pike's Peak, CO	747	miles	1202.18	21	days	21	57.25	NA
102	Stagecoach	A day along the Leavenworth-Pike's Peak Stage	65	miles	104.61	1	days	1	104.61	NA
103	Stagecoach	A day along the Leavenworth-Pike's Peak Stage	50	miles	80.47	1	days	1	80.47	NA
104	Stagecoach	A day along the Leavenworth-Pike's Peak Stage	25	miles	40.23	1	days	1	40.23	NA
105	Stagecoach	A day along the Leavenworth-Pike's Peak Stage	20	miles	32.19	1	days	1	32.19	NA
106	Stagecoach	A day along the Leavenworth-Pike's Peak Stage	25	miles	40.23	1	days	1	40.23	NA
107	Stagecoach	A day along the Leavenworth-Pike's Peak Stage	15	miles	24.14	1	days	1	24.14	NA
108	Stagecoach	A day along the Leavenworth-Pike's Peak Stage	15	miles	24.14	1	days	1	24.14	NA
109	Stagecoach	A day along the Leavenworth-Pike's Peak Stage	25	miles	40.23	1	days	1	40.23	NA
110	Stagecoach	A day along the Leavenworth-Pike's Peak Stage	20	miles	32.19	1	days	1	32.19	NA
111	Stagecoach	A day along the Leavenworth-Pike's Peak Stage	20	miles	32.19	1	days	1	32.19	NA
112	Stagecoach	St. Louis, MO to San Francisco, CA	2800	miles	4506.16	20	days	20	225.31	NA
113	Stagecoach	Denver, CO to Julesburg, CO	225	miles	362.10	17.5	hours	0.729	496.60	NA
114	Stagecoach	Denver, CO to Golden, CO	15	miles	24.14	55	mins	0.038	632.03	NA
115	Stagecoach	Salt Lake City, UT to Walla Walla, OR	1000	miles	1609.34	16.5	days	16.5	97.54	1864
116	Stagecoach	Atchison, KS to Sacramento, CA	2500	miles	4023.36	NU	days	NU	200.00	NA
117	Stagecoach	Virginia City, MT to Helena, MT	125	miles	201.17	14.5	hours	0.604	332.97	NA
118	Stagecoach	Virginia City, MT to Helena, MT	125	miles	201.17	10	hours	0.417	482.80	NA
119	Stagecoach	Folsom, CA to Atchison, KS	2000	miles	3218.69	290	hours	12.08	266.37	NA
120	Stagecoach	Central Overland Trail	NU	miles	NU	NU	days	NU	17.71	NA
121	Stagecoach	Denver, CO to Atchison, KS	500	miles	804.67	5	days	5	160.93	1865
122	Stagecoach	Denver, CO to Atchison, KS	500	miles	804.67	83.25	hours	3.469	231.98	NA
123	Stagecoach	Salt Lake City, UT to Virginia City, MT	600	miles	965.61	120	hours	5	193.12	1865
124	Roman Training March	NA	24	miles	38.62	1	days	1	38.62	100 AD
125	Battle of Ulm	Napoleon's approach march	200	miles	321.87	13	days	13	24.76	NU
126	Battle of Flanders	German advance through Ardenne & Flanders	200	miles	321.87	10	days	10	32.19	NU
127	Am. Civil War	Grierson's Cavalry Raid through MS in LA	600	miles	965.61	16	days	16	60.35	1863
128	Am. Civil War	Jackson's Flank March at Chancellorsville	10.5	miles	16.90	8	hours	0.333	50.69	2-May-1863
129	WW I WW Europe	Deployment of CCB, Heerlen to St. Vith	67	miles	107.83	12	hours	0.5	215.65	17-Dec-44
130	WW I WW Europe	CCB, US 4th Armd Div, Hammelburg Raid	60	miles	96.56	14.5	hours	0.604	159.82	27-Mar-45
131	WW I WW Europe	US 2d Inf Div, approach to Chateau-Thierry	73	miles	117.48	17	hours	0.708	165.86	30-Dec-1899
132	WW I WW Europe	US 2d Inf Div, approach to Chateau-Thierry	110	miles	177.03	22	hours	0.917	193.12	30-Dec-1899
133	WW I East Front	Vistula-Order Operation	210	km	210.00	6	days	6	35.00	13-Jan-45
134	WW II East Front	Ukraine, Sov 322d Rifle Div, XV Corps attack	8	km	8.00	1	days	1	8.00	Jul-1944
135	WW II East Front	Ukraine, Sov XV Corps attack	8	km	8.00	1	days	1	8.00	14-Jul-44

MISCROAD

NO.	SHORT DESCRIPTION	ROUTE, LOCALE, SECTOR, OR OTHER INFORMATION	DISTANCE (VALUE)	DIST UNITS	DISTANCE (KM)	TIME (VALUE)	TIME UNITS	TIME (DAYS)	RATE (KM/DAY)	START DATE-1
136	Wilson's Raid	Eastport, AL to Jasper, AL	80 miles		128.75	6	days	6	21.46	22-Mar-65
137	Wilson's Raid	Jasper, AL to Locust Fork, AL	25 miles		40.23	1	days	1	40.23	28-Mar-65
138	Wilson's Raid	Locust Fork R., LA to Elyton, AL	20 miles		32.19	1	days	1	32.19	29-Mar-65
139	Wilson's Raid	Elyton, AL to Cahaba R., AL	12 miles		19.31	1	days	1	19.31	30-Mar-65
140	Wilson's Raid	Cahaba R., AL to South of Montevallo, AL	27 miles		43.45	1	days	1	43.45	31-Mar-65
141	Wilson's Raid	S of Montevallo, AL to Ebenezer Church, AL	23 miles		37.01	1	days	1	37.01	01-Apr-65
142	Wilson's Raid	Ebenezer Church, AL to Selma, AL	21 miles		33.80	1	days	1	33.80	02-Apr-65
143	Wilson's Raid	Selma, AL	0 miles		0.00	7	days	7	0.00	03-Apr-65
144	Wilson's Raid	Selma, AL to Lowndesboro, AL	30 miles		48.28	1	days	1	48.28	10-Apr-65
145	Wilson's Raid	Lowndesboro, AL to Catoma Cr., AL	24 miles		38.62	1	days	1	38.62	11-Apr-65
146	Wilson's Raid	Catoma Cr., AL to Montgomery, AL	5 miles		8.05	1	days	1	8.05	12-Apr-65
147	Wilson's Raid	at Montgomery, AL	0 miles		0.00	1	days	1	0.00	13-Apr-65
148	Wilson's Raid	Montgomery, AL to Tuskegee, AL	45 miles		72.42	2	days	2	36.21	14-Apr-65
149	Wilson's Raid	Tuskegee, AL to Columbus, GA	50 miles		80.47	1	days	1	80.47	16-Apr-65
150	Wilson's Raid	at Columbus, GA	0 miles		0.00	1	days	1	0.00	17-Apr-65
151	Wilson's Raid	Columbus, GA to Double Bridge, GA	45 miles		72.42	1	days	1	72.42	18-Apr-65
152	Wilson's Raid	Double Bridge, GA to Thomaston, GA	8 miles		12.87	1	days	1	12.87	19-Apr-65
153	Wilson's Raid	Thomaston, GA to Macon, GA	45 miles		72.42	1	days	1	72.42	20-Apr-65
154	Wilson's Raid	Total	460 miles		740.30	30	days	30	24.68	22-Mar-65
155	Jefferson Davis Flite	Richmond, VA to Danville, VA	160 miles		257.50	1	days	1	257.50	02-Apr-65
156	Jefferson Davis Flite	at Danville, VA	0 miles		0.00	8	days	8	0.00	03-Apr-65
157	Jefferson Davis Flite	Danville, VA to Greensboro, NC	50 miles		80.47	1	days	1	80.47	11-Apr-65
158	Jefferson Davis Flite	at Greensboro, NC	0 miles		0.00	4	days	4	0.00	12-Apr-65
159	Jefferson Davis Flite	Greensboro, NC to Charlotte, NC	115 miles		185.07	3	days	2	92.54	16-Apr-65
160	Jefferson Davis Flite	at Charlotte, NC	0 miles		0.00	9	days	9	0.00	19-Apr-65
161	Jefferson Davis Flite	Charlotte, NC to York, SC	30 miles		48.28	1	days	1	48.28	28-Apr-65
162	Jefferson Davis Flite	at York, SC	0 miles		0.00	1	days	1	0.00	29-Apr-65
163	Jefferson Davis Flite	York, SC to Union, SC	35 miles		56.33	1	days	1	56.33	30-Apr-65
164	Jefferson Davis Flite	at Union, SC	0 miles		0.00	1	days	1	0.00	01-May-65
165	Jefferson Davis Flite	Union, SC to Abbeville, SC	70 miles		112.65	1	days	1	112.65	02-May-65
166	Jefferson Davis Flite	at Abbeville, SC	0 miles		0.00	1	days	1	0.00	03-May-65
167	Jefferson Davis Flite	Abbeville, SC to Washington, GA	66 miles		106.22	1	days	1	106.22	04-May-65
168	Jefferson Davis Flite	Washington, GA to Sandersville, GA	80 miles		128.75	1	days	1	128.75	05-May-65
169	Jefferson Davis Flite	at Sandersville, GA	0 miles		0.00	2	days	2	0.00	06-May-65
170	Jefferson Davis Flite	Sandersville, GA to Abbeville, GA	110 miles		177.03	1	days	1	177.03	08-May-65
171	Jefferson Davis Flite	at Abbeville, GA	0 miles		0.00	1	days	1	0.00	09-May-65
172	Jefferson Davis Flite	Abbeville, GA to Irwinville, GA	40 miles		64.37	1	days	1	64.37	10-May-65
173	Jefferson Davis Flite	Total	756 miles		1216.66	39	days	39	31.20	02-Apr-65

MISCROAD

NO.	SHORT DESCRIPTION	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	REFERENCE NUMBERS
1	Western Cattle Drives	1890	NA	On hoof	Prairie	Prairie	Firm	3000	1
2	Western Cattle Drives	9-Dec-1866	Indians	On hoof	Prairie	Prairie	Firm	1000	1
3	Gen Allenby	1918	Lite	Horse	Desert	Desert	Desert	NA	2
4	Falklands War	Jun 1982	None	Foot	Hilly	Prairie	Boggy	Company	3
5	First Crusade	1099	None	Foot	Varied	Varied	Varied	Countless	4
6	First Crusade	1099	None	Horse	Varied	Varied	Varied	35000	4
7	Bataan Death March	NA	None	Foot	Rolling	Tropical	Firm	70000	5
8	Bataan Death March	NA	None	Foot	Rolling	Tropical	Firm	70000	5
9	Bataan Death March	NA	None	Rail	Rolling	Tropical	Firm	70000	5
10	Bataan Death March	NA	None	Foot	Rolling	Tropical	Firm	70000	5
11	Bataan Death March	NA	None	Foot	Rolling	Tropical	Firm	70000	5
12	Japanese Trng March	NA	None	Foot	NA	NA	NA	NA	5
13	Geneva Convention	NA	None	Foot	NA	NA	NA	NA	5
14	Alexander the Great	333 BC	Varied	Foot	Varied	Varied	Varied	NA	6
15	Alexander the Great	331 BC	Varied	Foot	Varied	Varied	Varied	NA	6
16	Alexander the Great	331 BC	Varied	Foot	Varied	Varied	Varied	NA	6
17	Alexander the Great	330 BC	Varied	Foot	Varied	Varied	Varied	NA	6
18	Alexander the Great	327 BC	Varied	Foot	Varied	Varied	Varied	NA	6
19	Alexander the Great	323 BC	Varied	Foot	Varied	Varied	Varied	NA	6
20	Physical Fitness Test	NA	Varied	Foot	Varied	Varied	Varied	NA	7
21	Physical Fitness Test	NA	Varied	Foot	Varied	Varied	Varied	NA	7
22	Pursuit of Nez Perce	5-Oct-1877	Med	Horse	Varied	Varied	Varied	NA	8
23	US Army Motor Convoy	06-Sep-19	None	Motor	Varied	Varied	Varied	282	9
24	Civil Rights March	25-Mar-65	None	Foot	Flat	None	Firm	NA	10
25	US Training March	NA	None	Foot	NA	NA	Firm	NA	11
26	Zulu impi	1800	None	Foot	NA	NA	Firm	NA	12
27	Stonewall Jackson	1860's	None	Foot	Rolling	Mixed	Firm	NA	13
28	Stonewall Jackson	1860's	None	Foot	Flat	Mixed	Firm	NA	13
29	Henry Kyd Douglas	1860's	None	Horse	Mountain	Mixed	Wet	NA	13
30	Stonewall Jackson	1860's	None	Foot	Flat	Mixed	Muddy	NA	13
31	Stonewall Jackson	1860's	None	Foot	Rolling	Mixed	Firm	NA	13
32	Stonewall Jackson	1860's	None	Foot	Rolling	Mixed	Firm	NA	13
33	A. P. Hill	1860's	None	Foot	Hilly	Mixed	Firm	NA	13, 16
34	Stonewall Jackson	5-Jun-1863	None	Foot	Rolling	Mixed	Firm	NA	13
35	Stonewall Jackson	6-Jun-1863	None	Foot	Rolling	Mixed	Firm	NA	13
36	Stonewall Jackson	7-Jun-1863	None	Foot	Rolling	Mixed	Firm	NA	13
37	Stonewall Jackson	8-Jun-1863	None	Foot	Rolling	Mixed	Firm	NA	13
38	Stonewall Jackson	9-Jun-1863	None	Foot	Rolling	Mixed	Firm	NA	13
39	Stonewall Jackson	10-Jun-1863	None	Foot	Rolling	Mixed	Firm	NA	13
40	Stonewall Jackson	11-Jun-1863	None	Foot	Rolling	Mixed	Firm	NA	13
41	Stonewall Jackson	11-Jun-1863	None	Foot	Rolling	Mixed	Firm	NA	13
42	Stonewall Jackson	1860's	None	Foot	Rolling	Mixed	Firm	8000	13
43	I Corps	Sep-1914	Med	Foot	NA	NA	NA	Corps	14
44	Retreating forces	Sep-1914	None	Foot	NA	NA	NA	NA	14
45	Lodz	14-Nov-14	None	Foot	NA	NA	NA	Army	14

MISCROAD

NO.	DESCRIPTION	END DATE-2	OPP/W INTENS	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	REFERENCE NUMBERS
46	Lodz	17-Nov-14	None	Foot	NA	NA	NA	Army	14
47	Fall of Poland	1939	Light	Foot	NA	NA	NA	Army Grp	15
48	Humphrey's Division	17-Sep-1862	None	Foot	Mountain	Mixed	Firm	Division	16
49	Average day's march	1796	NA	Foot	NA	NA	NA	NA	17
50	Average day's march	1800	NA	Foot	NA	NA	NA	NA	17
51	Average day's march	1805	NA	Foot	NA	NA	NA	NA	17
52	Average day's march	1806	NA	Foot	NA	NA	NA	NA	17
53	Average day's march	1815	NA	Foot	NA	NA	NA	NA	17
54	Great Peace March	15-Nov-86	None	Foot	Varied	Varied	Firm	1500	18
55	Covered wagon	6-Aug-1849	None	Wagon	NA	NA	NA	30	19
56	Covered wagon	1830	None	Wagon	NA	NA	NA	80	20
57	Covered wagon	1843	None	Wagon	NA	NA	NA	1250	20
58	Covered wagon	1844	None	Wagon	NA	NA	NA	NA	20
59	Covered wagon	1844	None	Wagon	NA	NA	NA	NA	20
60	Covered wagon	1844	None	Wagon	NA	NA	NA	NA	20
61	Covered wagon	NA	None	Wagon	NA	NA	NA	NA	21
62	Covered wagon	1847	None	Wagon	NA	NA	NA	NA	22, 23
63	Pony Express	1861	None	Horse	NA	NA	NA	1	22, 26
64	Pony Express	1861	None	Horse	NA	NA	NA	1	23, 26
65	Lewis and Clark	23-Sep-1806	None	Foot & boat	NA	NA	NA	40	22, 23, 25
66	Lewis and Clark	23-Sep-1806	None	Foot & boat	NA	NA	NA	40	22, 23, 25
67	Stagecoach	1790	None	Coach	NA	NA	NA	NA	26
68	Stagecoach	1849	None	Coach	Varied	Varied	Firm	NA	26
69	Stagecoach	10-Jun-1849	None	Coach	Varied	Varied	Firm	NA	26
70	Stagecoach	1849	None	Coach	Varied	Varied	Firm	NA	26
71	Stagecoach	Spring 1850	None	Coach	Varied	Varied	Firm	NA	26
72	Stagecoach	July 1851	None	Coach	Varied	Varied	Firm	NA	26
73	Stagecoach	1850	None	Coach	Varied	Varied	Firm	NA	26
74	Stagecoach	1853	None	Coach	Varied	Varied	Firm	NA	26
75	Stagecoach	1854	None	Coach	Varied	Varied	Firm	NA	26
76	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
77	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
78	Stagecoach	26-Nov-1853	None	Coach	Varied	Varied	Firm	NA	26
79	Stagecoach	1855	None	Coach	Varied	Varied	Firm	NA	26
80	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
81	Stagecoach	1850	None	Coach	Varied	Varied	Firm	NA	26
82	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
83	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
84	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
85	Stagecoach	1857	None	Coach	Varied	Varied	Firm	NA	26
86	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
87	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
88	Stagecoach	1858	None	Coach	Varied	Varied	Firm	NA	26
89	Stagecoach	1857	None	Coach	Varied	Varied	Firm	NA	26
90	Stagecoach	1858	None	Coach	Varied	Varied	Firm	NA	26

MISCROAD

NO.	SHORT DESCRIPTION	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	REFERENCE NUMBERS
91	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
92	Stagecoach	Fall 1858	None	Coach	Varied	Varied	Firm	NA	26
93	Stagecoach	Fall 1858	None	Coach	Varied	Varied	Firm	NA	26
94	Stagecoach	Fall 1858	None	Coach	Varied	Varied	Firm	NA	26
95	Stagecoach	Fall 1858	None	Coach	Varied	Varied	Firm	NA	26
96	Stagecoach	Fall 1858	None	Coach	Varied	Varied	Firm	NA	26
97	Stagecoach	Fall 1858	None	Coach	Varied	Varied	Firm	NA	26
98	Stagecoach	Fall 1858	None	Coach	Varied	Varied	Firm	NA	26
99	Stagecoach	Fall 1858	None	Coach	Varied	Varied	Firm	NA	26
100	Stagecoach	Fall 1858	None	Coach	Varied	Varied	Firm	NA	26
101	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
102	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
103	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
104	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
105	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
106	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
107	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
108	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
109	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
110	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
111	Stagecoach	NA	None	Coach	Prairie	Prairie	Firm	NA	26
112	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
113	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
114	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
115	Stagecoach	1864	None	Coach	Varied	Varied	Firm	NA	26
116	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
117	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
118	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
119	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
120	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
121	Stagecoach	1865	None	Coach	Varied	Varied	Firm	NA	26
122	Stagecoach	NA	None	Coach	Varied	Varied	Firm	NA	26
123	Stagecoach	1866	None	Coach	Varied	Varied	Firm	NA	26
124	Roman Training March	100 AD	None	Foot	Varied	Varied	Firm	NA	29
125	Battle of Ulm	NU	None	Foot	Hilly	Temperate	Firm	210500	30
126	Battle of Flanders	NU	Med	Motor	Rolling	Wooded	Firm	NA	30
127	Am. Civil War	1863	Lite	Horse	Rolling	Wooded	Firm	1700	31
128	Am. Civil War	2-May-1863	None	Foot	Flat	Wooded	Firm	Corps	32
129	WW I NW Europe	17-Dec-44	None	Motor	Rolling	Wooded	Firm	Bde	32
130	WW I NW Europe	27-Mar-45	Med	Motor	Rolling	Wooded	Firm	Bde	32
131	WW I NW Europe	30-Dec-1899	None	Motor	Rolling	Wooded	Firm	Div	32
132	WW I NW Europe	30-Dec-1899	None	Motor	Rolling	Wooded	Firm	Bn	32
133	WW I East Front	18-Jan-45	Lite	Foot	Steppe	Steppe	Firm	Army	33
134	WW I East Front	Jul-1944	Hvy	Foot	Steppe	Steppe	Firm	Div	34
135	WW I East Front	14-Jul-44	Hvy	Foot	Steppe	Steppe	Firm	Div	34

MISCROAD

NO.	SHORT DESCRIPTION	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	REFERENCE NUMBERS
136	Wilson's Raid	27-Mar-65	None	Horse	Hilly	Forest	Wet	13500	35
137	Wilson's Raid	28-Mar-65	None	Horse	Hilly	Forest	Wet	13500	35
138	Wilson's Raid	29-Mar-65	None	Horse	Hilly	Forest	Wet	13500	35
139	Wilson's Raid	30-Mar-65	Lite	Horse	Hilly	Forest	Wet	13500	35
140	Wilson's Raid	31-Mar-65	Med	Horse	Rolling	Open	Firm	13500	35
141	Wilson's Raid	01-Apr-65	Hvy	Horse	Rolling	Open	Firm	13500	35
142	Wilson's Raid	02-Apr-65	Hvy	Horse	Rolling	Open	Firm	13500	35
143	Wilson's Raid	09-Apr-65	None	Horse	Rolling	Open	Firm	13500	35
144	Wilson's Raid	10-Apr-65	Lite	Horse	Rolling	Open	Firm	13500	35
145	Wilson's Raid	11-Apr-65	Lite	Horse	Rolling	Open	Firm	13500	35
146	Wilson's Raid	12-Apr-65	Lite	Horse	Rolling	Open	Firm	13500	35
147	Wilson's Raid	13-Apr-65	Lite	Horse	Rolling	Open	Firm	13500	35
148	Wilson's Raid	15-Apr-65	Lite	Horse	Rolling	Open	Firm	11500	35
149	Wilson's Raid	16-Apr-65	Hvy	Horse	Rolling	Open	Firm	11500	35
150	Wilson's Raid	17-Apr-65	None	Horse	Rolling	Open	Firm	11500	35
151	Wilson's Raid	18-Apr-65	Lite	Horse	Rolling	Open	Firm	11500	35
152	Wilson's Raid	19-Apr-65	Lite	Horse	Rolling	Open	Firm	11500	35
153	Wilson's Raid	20-Apr-65	Lite	Horse	Rolling	Open	Firm	11500	35
154	Wilson's Raid	20-Apr-65	NA	Horse	Rolling	Open	Firm	12500	35
155	Jefferson Davis Flite	02-Apr-65	None	Horse	Rolling	NA	Firm	NA	35
156	Jefferson Davis Flite	10-Apr-65	None	Horse	Rolling	NA	Firm	NA	35
157	Jefferson Davis Flite	11-Apr-65	None	Horse	Rolling	NA	Firm	NA	35
158	Jefferson Davis Flite	15-Apr-65	None	Horse	Rolling	NA	Firm	NA	35
159	Jefferson Davis Flite	18-Apr-65	None	Horse	Rolling	NA	Firm	NA	35
160	Jefferson Davis Flite	27-Apr-65	None	Horse	Rolling	NA	Firm	NA	35
161	Jefferson Davis Flite	28-Apr-65	None	Horse	Rolling	NA	Firm	NA	35
162	Jefferson Davis Flite	29-Apr-65	None	Horse	Rolling	NA	Firm	NA	35
163	Jefferson Davis Flite	30-Apr-65	None	Horse	Rolling	NA	Firm	NA	35
164	Jefferson Davis Flite	01-May-65	None	Horse	Rolling	NA	Firm	NA	35
165	Jefferson Davis Flite	02-May-65	None	Horse	Rolling	NA	Firm	NA	35
166	Jefferson Davis Flite	03-May-65	None	Horse	Rolling	NA	Firm	NA	35
167	Jefferson Davis Flite	04-May-65	None	Horse	Rolling	NA	Firm	NA	35
168	Jefferson Davis Flite	05-May-65	None	Horse	Rolling	NA	Firm	NA	35
169	Jefferson Davis Flite	07-May-65	None	Horse	Rolling	NA	Firm	NA	35
170	Jefferson Davis Flite	08-May-65	None	Horse	Rolling	NA	Firm	NA	35
171	Jefferson Davis Flite	09-May-65	None	Horse	Rolling	NA	Firm	NA	35
172	Jefferson Davis Flite	10-May-65	None	Horse	Rolling	NA	Firm	NA	35
173	Jefferson Davis Flite	10-May-65	None	Horse	Rolling	NA	Firm	NA	35

MISCROAD

NO.	SHORT DESCRIPTION	COMMENTS
1	Western Cattle Drives	Average herd of 3000 cattle, with 30-40 cowboys and several head of horse
2	Western Cattle Drives	Nelson Story's drive of 1000 cattle
3	Gen Allenby	"...one cavalry division covered over 550 miles in 38 days."
4	Falklands War	42nd Brit Commandos. Weather cold, wet, raw.
5	First Crusade	
6	First Crusade	
7	Bataan Death March	Lack of food and water, very hot, atrocious conditions
8	Bataan Death March	Lack of food and water, very hot, atrocious conditions
9	Bataan Death March	Lack of food and water, very hot, atrocious conditions
10	Bataan Death March	Lack of food and water, very hot, atrocious conditions
11	Bataan Death March	Lack of food and water, very hot, atrocious conditions
12	Japanese Trng March	
13	Geneva Convention	
14	Alexander the Great	
15	Alexander the Great	
16	Alexander the Great	
17	Alexander the Great	
18	Alexander the Great	
19	Alexander the Great	
20	Physical Fitness Test	For men aged 40 to 45.
21	Physical Fitness Test	For women aged 56 to 60.
22	Pursuit of Mez Perce	
23	US Army Motor Convoy	An experimental and public relations exercise
24	Civil Rights March	
25	US Training March	
26	Zulu impi	
27	Stonewall Jackson	
28	Stonewall Jackson	
29	Henry Kyd Douglas	
30	Stonewall Jackson	
31	Stonewall Jackson	
32	Stonewall Jackson	
33	A. P. Hill	A. P. Hill's Light Division
34	Stonewall Jackson	
35	Stonewall Jackson	
36	Stonewall Jackson	
37	Stonewall Jackson	
38	Stonewall Jackson	
39	Stonewall Jackson	
40	Stonewall Jackson	
41	Stonewall Jackson	
42	Stonewall Jackson	
43	1 Corps	Gen Early's Corps
44	Retreating forces	Gen Hermann von Francois' 1st Corps
45	Lodz	"...some retreating forces fell back 55 miles in one 50 hour period."

MISCROAD

NO.	SHORT DESCRIPTION	COMMENTS
46	Lodz	
47	Fall of Poland	Forced march by certain German units
48	Humphrey's Division	
49	Average day's march	Based on 203 marches that year, ranging from 5 to 33.5 miles
50	Average day's march	Based on 135 marches that year, ranging from 2.3 to 23.6 miles
51	Average day's march	Based on 267 marches that year, ranging from 7.4 to 29.8 miles
52	Average day's march	Based on 94 marches that year, ranging from 3 to 30.4 miles
53	Average day's march	Based on 20 marches that year, ranging from 6.2 to 19.8 miles
54	Great Peace March	Mojave, Loveland Pass, Nebraska, Pennsylvania, NYC, DC
55	Covered wagon	10 light wagons, 40 mules
56	Covered wagon	Experimental trek with 12 wagons, made 15-25 mi/day
57	Covered wagon	Typically 15-20 mi/day, 1000-1500 people, 120 wagons, 5000 head of stock
58	Covered wagon	Cited as very slow progress in driving rain
59	Covered wagon	Cited as "making good time along this stretch"
60	Covered wagon	Estimated rate in difficult terrain for wagons
61	Covered wagon	Characterized as "average wagon train" on Oregon Trail
62	Covered wagon	Brigham Young's first visit to Salt Lake Valley from his Winter Quarters
63	Pony Express	Using 153 way stations along the route
64	Pony Express	Presumably, the maximum distance made good in one day
65	Lewis and Clark	Average rate for entire trip
66	Lewis and Clark	Average rate, excluding the 133 days spent "wintering over" at Vancouver
67	Stagecoach	400 miles in 10-12 days, one way, circa 1790
68	Stagecoach	Advertisement of Pioneer Lines
69	Stagecoach	Actual performance, Pioneer Lines, vicinity Fort Kearney
70	Stagecoach	Advertisement for Stockton to Stanislaus Stage
71	Stagecoach	San Francisco to San Jose Stage, time about 9 hours
72	Stagecoach	Gilroy Stage Company
73	Stagecoach	Through in 12 hours
74	Stagecoach	Winning time
75	Stagecoach	Via San Fernando Valley, Tejon Pass, to Kern R. 40 mi E. of Bakersfield
76	Stagecoach	In haste because of Indians and no water
77	Stagecoach	
78	Stagecoach	Along the Santa Fe Trail
79	Stagecoach	Contract and ad, 1850's, 20 to 25 days along Santa Fe Trail
80	Stagecoach	Along the Santa Fe Trail
81	Stagecoach	Mail contract (they were unable to meet the contract schedule)
82	Stagecoach	Initial exploration party
83	Stagecoach	Butterfield Overland Mail Route: See Reference Number 33 for route
84	Stagecoach	Mail contract--often mail sent ahead by mule to meet 30-day contract
85	Stagecoach	
86	Stagecoach	When no time pressure, typically ran at 16 to 24 km/day
87	Stagecoach	Jackass Line
88	Stagecoach	Proposal for contract--proposal not accepted
89	Stagecoach	
90	Stagecoach	Crandall's Stage--across Sierra Nevada range

NO.	SHORT DESCRIPTION	COMMENTS
91	Stagecoach	25-day contract limit for mail
92	Stagecoach	Butterfield's first run
93	Stagecoach	Butterfield's first run
94	Stagecoach	Butterfield's first run
95	Stagecoach	Butterfield's first run
96	Stagecoach	Butterfield's first run
97	Stagecoach	Butterfield's first run
98	Stagecoach	Butterfield's first run
99	Stagecoach	Butterfield's first run
100	Stagecoach	Butterfield's first run
101	Stagecoach	Estimated time
102	Stagecoach	
103	Stagecoach	
104	Stagecoach	
105	Stagecoach	
106	Stagecoach	Estimated, based on "two stations" made that day
107	Stagecoach	Estimated, based on "one station" made that day
108	Stagecoach	Estimated, based on "one station" made that day
109	Stagecoach	
110	Stagecoach	
111	Stagecoach	
112	Stagecoach	18 to 24 days for Butterfield Stage--See Reference Number 34 for remarks
113	Stagecoach	Done as a "stunt"
114	Stagecoach	Done as a "stunt"
115	Stagecoach	
116	Stagecoach	"...amazingly fast" time for 125 miles in 14 1/2 hours
117	Stagecoach	Done as a ploy to crush competition and seize a monopoly
118	Stagecoach	Done as a "stunt"
119	Stagecoach	10-12 miles per day for ox-drawn freight wagons
120	Stagecoach	Normal time for stage in mid-1860's
121	Stagecoach	Done as a "stunt"
122	Stagecoach	
123	Stagecoach	See Reference 35
124	Roman Training March	
125	Battle of Ulm	
126	Battle of Flanders	
127	Am. Civil War	
128	Am. Civil War	
129	WW I NW Europe	CCB of US 7th Armd Div, commanded by BG Bruce C. Clarke
130	WW I NW Europe	Raid by Task Force Baum of CCB
131	WW I NW Europe	Chaumont-en-Vexim to May-en-Multien, by truck
132	WW I NW Europe	US 7th Machine Gun Bn, by truck
133	WW I East Front	Three Rifle Corps of the 21st Soviet Army
134	WW I East Front	
135	WW I East Front	Attack by 336th Rifle Div(-)(+) and 322 Rifle Div(-)(+)

MISCROAD

NO.	SHORT DESCRIPTION	COMMENTS
136	Wilson's Raid	Rugged, wooded terrain. Year is 1865
137	Wilson's Raid	
138	Wilson's Raid	
139	Wilson's Raid	
140	Wilson's Raid	
141	Wilson's Raid	
142	Wilson's Raid	
143	Wilson's Raid	
144	Wilson's Raid	
145	Wilson's Raid	
146	Wilson's Raid	
147	Wilson's Raid	
148	Wilson's Raid	
149	Wilson's Raid	
150	Wilson's Raid	
151	Wilson's Raid	
152	Wilson's Raid	
153	Wilson's Raid	
154	Wilson's Raid	
155	Jefferson Davis Flite	Year is 1865. Small party for escort and support.
156	Jefferson Davis Flite	
157	Jefferson Davis Flite	
158	Jefferson Davis Flite	
159	Jefferson Davis Flite	
160	Jefferson Davis Flite	
161	Jefferson Davis Flite	
162	Jefferson Davis Flite	
163	Jefferson Davis Flite	
164	Jefferson Davis Flite	
165	Jefferson Davis Flite	
166	Jefferson Davis Flite	
167	Jefferson Davis Flite	
168	Jefferson Davis Flite	
169	Jefferson Davis Flite	
170	Jefferson Davis Flite	
171	Jefferson Davis Flite	
172	Jefferson Davis Flite	
173	Jefferson Davis Flite	

Croxtan's "Lost Brigade" detached

NAPOLEON

1. Data Source:

- a. Title: Napoleon—A History of the Art of War, From Lutzen to Waterloo, With a Detailed Account of the Napoleonic Wars
- b. Author: Dodge, Theodore Ayrault
- c. Date: 1904-1907 (1st Ed.), 1970 (reprint)
- d. Organization: AMS Press, New York, NY (for reprint)
- e. Number: NA
- f. Available from: Publisher and libraries

2. Data Description:

- a. The NAPOLEON data are taken from the table entitled "Some Noteworthy Marches" of Appendix D in Volume 4 of the source.
- b. The source table gives distances and times of march for some ancient marches, with some accompanying notes and remarks.

3. Discussion and Comments:

a. All of the marches recorded in the source took place between 1759 AD and 1815 AD. Most of them are for French troops. The author has a sound reputation as a military historian, and apparently took some care to make these data as accurate as he could. However, in statistical terms they are a "convenience sample," and not necessarily a random one. In any event, they apparently are advances by forces that are unopposed or but lightly engaged.

b. Dodge gives the following tabulation of "average day's marches of an army corps," which he attributes to Colonel Lewal, French staff:

<u>In</u>	<u>Of</u>		<u>The longest was</u>	<u>The shortest was</u>	<u>The average was</u>
1796	203	marches	33.5 miles	5 miles	15.5 miles
1800	135	"	23.6 "	2.3 "	10.6 "
1805	267	"	29.8 "	7.4 "	16.1 "
1806	94	"	30.4 "	3 "	15.5 "
1815	20	"	19.8 "	6.2 "	13.7 "

Note given in the source, but readily computed from the information above, we find the weighted average rate of march to be 14.75 miles per day, or 23.74 km/day.

4. Data Table Notes:

- a. Note 1: Including battle of Bassano and two combats.
- b. Note 2: Including battle of Rivoli. Marched two nights and fought day between.
- c. Note 3: Including maneuvers and most gallant fighting at Austerlitz.
- d. Note 4: Carts to carry packs and men, turn and turn about.

NAPOLEON

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (HOURS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	Pr. Henry's Army	Landskron to Moyerswerda	58	93.34	2.1	2.1	44.45	22-Sep-1759	24-Sep-1759	NA	NA	NA
2	Pr. Henry's Army	Landsberg to Breslau	90	144.84	3	3	48.28	Aug-1760	Aug-1760	NA	NA	NA
3	Pr. Eugene of Wurtemberg	To relief of Berlin	40	64.37	1	1	64.37	Oct-1760	Oct-1760	NA	NA	NA
4	French Corps d'Elite	Tortona to Valencia	44	70.81	1.5	1.5	47.21	6-May-1796	7-May-1796	NA	NA	NA
5	Army of Italy	Down Brenta Valley	50	80.47	2.5	2.5	32.19	5-Sep-1796	8-Sep-1796	NA	NA	NA
6	Massena's Army	Bassano, Vicenza, Ronco	42	67.59	2.5	2.5	27.04	8-Sep-1796	10-Sep-1796	NA	NA	NA
7	Augereau's Army	Bassano, Padua, Legnano	60	96.56	3.5	3.5	27.59	8-Sep-1796	11-Sep-1796	NA	NA	NA
8	Army of Italy	Brenta Valley	100	160.93	6	6	26.82	5-Sep-1796	11-Sep-1796	NA	NA	NA
9	Massena's Army	Verona, Rivoli, Roverbello	45	72.42	1.5	1.5	48.28	13-Jan-1797	15-Jan-1797	NA	NA	NA
10	Army of Orient	Acre to Cairo	400	643.74	26	26	24.76	21-May-1799	14-Jun-1799	NA	NA	NA
11	Suwarov's Army	Alexandria to Tidone	50	80.47	1.5	1.5	53.64	16-Jun-1799	17-Jun-1799	NA	NA	NA
12	Grand Army	Channel to Rhine	400	643.74	26	26	24.76	Sep-1805	Sep-1805	NA	NA	NA
13	Friant's Division	Leopoldsdorf to Nicholsburg	53	85.30	1	1	85.30	29-Nov-1805	30-Nov-1805	NA	NA	NA
14	Friant's Division	Nicholsburg to Raigern	25	40.23	0.9	0.9	44.70	30-Nov-1805	1-Dec-1805	NA	NA	NA
15	Friant's Division	Leopoldsdorf to Austerlitz	112	180.25	5	5	36.05	29-Nov-1805	4-Dec-1805	NA	NA	NA
16	Imperial Guard	Paris to Osnaburg	435	700.06	13	13	53.85	Sep-1806	Sep-1806	NA	NA	NA
17	Junot's Army	Salamanca-Alcantara	158	254.28	5	5	50.86	Nov-1807	Nov-1807	NA	NA	NA
18	Hope's Army	To join Moore	47	75.64	1.5	1.5	50.43	1-Dec-1808	2-Dec-1808	NA	NA	NA
19	Napoleon's Army	Madrid towards Benavente	230	370.15	12	12	30.85	20-Dec-1808	31-Dec-1808	NA	NA	NA
20	Imperial Guard	Over Guadaramas	50	80.47	2	2	40.23	21-Dec-1808	22-Dec-1808	NA	NA	Mountain
21	Massena's Army	Aichach to Pfaffenhofen	30	48.28	1	1	48.28	19-Apr-1809	19-Apr-1809	NA	NA	NA
22	Friant's Division	Hanau, Ratisbon, Thann	40	64.37	1.4	1.4	45.98	18-Apr-1809	19-Apr-1809	NA	NA	NA
23	Ney's Army	Aranda to Almazan	60	96.56	1.7	1.7	56.80	20-Apr-1809	21-Apr-1809	NA	NA	NA
24	Ney's Army	Aranda to Soria	80	128.75	3	3	42.92	20-Apr-1809	22-Apr-1809	NA	NA	Mountain
25	Craufurd's Force	Towards Talavera	43	69.20	0.9	0.9	76.89	28-Jul-1809	29-Jul-1809	NA	NA	NA
26	Marmont's Army	On Douro	50	80.47	2	2	40.23	15-Jul-1812	17-Jul-1812	NA	NA	NA
27	Imperial Guard	Lobenberg to Dresden	87	140.01	3	3	46.67	24-Aug-1813	26-Aug-1813	NA	NA	NA
28	Ney and Imperial Guard	Montmirail to Guignes	50	80.47	1.5	1.5	53.64	15-Feb-1814	16-Feb-1814	NA	NA	NA
29	Russian Foot Guard	After Fere Champenoise	48	77.25	1.1	1.1	70.23	Mar-1814	Mar-1814	NA	NA	NA
30	Napoleon and Elba Army	Golfe St. Juan to Grenoble	180	289.68	6	6	48.28	1-Mar-1815	6-Mar-1815	NA	NA	NA
31	Napoleon and Elba Army	Golfe St. Juan to Paris	500	804.67	20	20	40.23	1-Mar-1815	20-Mar-1815	NA	NA	NA

NAPOLEON

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	NOTES	COMMENTS
1	Pr. Henry's Army	NA	NA		
2	Pr. Henry's Army	NA	NA		
3	Pr. Eugene of Wurtemberg	NA	NA	5000 men	
4	French Corps d'Elite	NA	NA		
5	Army of Italy	NA	NA		Two combats on the way.
6	Massena's Army	NA	NA		Incl. battle of Bassano
7	Augereau's Army	NA	NA		Incl. battle of Bassano
8	Army of Italy	NA	NA		100-110 miles (Note 1)
9	Massena's Army	NA	NA		(Note 2)
10	Army of Orient	Desert	NA		
11	Smawrow's Army	NA	NA		
12	Grand Army	NA	NA		Six rest-days
13	Friant's Division	NA	NA		
14	Friant's Division	NA	NA		(Note 3)
15	Friant's Division	NA	NA		(Note 4)
16	Imperial Guard	NA	NA		
17	Junot's Army	NA	NA		
18	Hope's Army	NA	NA		
19	Napoleon's Army	NA	NA		
20	Imperial Guard	NA	Wet		In heavy storm over mountains.
21	Massena's Army	NA	NA		And helped win victory of Thann.
22	Friant's Division	NA	NA		
23	Ney's Army	NA	NA		
24	Ney's Army	NA	NA		Bad mountain roads.
25	Craufurd's Force	NA	NA		Hot day.
26	Marmont's Army	NA	NA	40-60 miles	With only temporary rest.
27	Imperial Guard	NA	NA		Of which 29 miles in 24 hours.
28	Ney and Imperial Guard	NA	NA		Partly by teams.
29	Russian Foot Guard	NA	NA		March on Paris (doubtful).
30	Napoleon and Elba Army	NA	NA		
31	Napoleon and Elba Army	NA	NA		

NORMANDY

1. Data Source:

- a. Title: Rates of Advance in Infantry Division Attacks in the Normandy-Northern France and Siegfried Line Campaigns
- b. Author: Wainstein, Leonard
- c. Date: December 1973
- d. Organization: Institute for Defense Analyses, 400 Army-Navy Drive, Arlington, VA 22202
- e. Number: Paper P-990
- f. Available from: DTIC AD-779 882

2. Data Description:

a. The NORMANDY data are taken from Table 1 (page 12) of the source. The source obtained its information from official US Army histories and available archival records such as Daily Summaries, SITREPS, G1 Journals, etc.

b. (p v, Preface) "The research presented in this paper is in the area of historical combat statistics for possible use as input to simulation models. ... The purpose of this paper is not to attempt to establish precise relationships among the factors of rate of advance, casualties, resistance, and terrain. There is usually insufficient numerical data for that even on a one-sided basis. Rather it is hoped that some general relationships—some proportions—will emerge that will be of use to model-builders."

c. The data consists of a representative sample of 50 Allied infantry division attacks in which an advance of at least 300 yards was gained. Of these, 47 were by US and 3 by Canadian divisions. These occurred in Normandy-Northern France between mid-June and mid-August 1944 (except for two attacks in Cherbourg in early September). An indication of the terrain, degree of resistance, Allied strength, and battle casualties is included.

d. (p 1) "It should be stressed that many attacks fail to gain any ground, and these 90 advances were chosen because they did show an advance. Later, the approximate percent of all attacks in which advances occurred is determined." (p 15) "... I have arbitrarily considered that advances of under 300 yards represented no advance."

e. Distance is not defined, but presumably is FEBA displacement.

f. The time interval is defined as (p 10) "For simplicity's sake, a single day has been established as the base unit, despite the fact that in nearly every case the action lasted less than a full day and, for most actions, even less than the daylight period of the day. The purpose of the study is not to determine rates of advance on an hourly basis, but rather to determine the scale of the forward movement achieved in a good-sized sample."

g. (p 1) "Only bald statistics are presented, since, for purposes of statistical analysis and simulation, descriptive text on each battle really contributes little beyond some additional understanding of factors that cannot be quantified."

h. (p 5) "Terrain has been categorized as (1) open, (2) mixed, and (3) close or difficult. The word mixed thus includes the two commonly used descriptors, moderately open and moderately close, the distinction between which is really rather fine and

essentially judgmental." (p 8) "... it is generally not possible to distinguish what proportion of an action occurred in a town versus the proportion that occurred on the open ground around it."

i. (pp 8-9, *passim*) "In the absence of German strength figures comparable to those obtainable for US units, degree of resistance rather than force ratio or enemy posture has been used as the descriptor for the enemy. ... The degree of enemy entrenchment—fortified position, prepared position, etc.—is not the best descriptor, since it is the fighting spirit of resistance maintained by the troops, as much as the strength of their position, that ultimately determines degree of resistance. ... In the Normandy cases, three simple categories of resistance are used: heavy, moderate, and light. For the Siegfried Line cases, five categories are used because the records employed a further breakdown of descriptor: heavy, moderate to heavy, moderate, light to moderate, and light. ... The descriptor terms are those generally used in reference to the actions in the official histories. Yet in several cases the term used does not appear to accord with the casualties suffered. ... It is obvious that no standard measure exists for the relationship between degree of resistance and casualties ..."

j. (p 10) "While the actions listed all involved a single division, it should be understood that the entire division was not always involved. Attacks involving two or three regiments were most common, while single regiment attacks are also included, since they did represent an effort mounted by a division in which the division artillery and tank units invariably participated. There are also included cases where all three regiments or brigades attacked simultaneously, but divisional attacks using only a portion of the division were the norm. Battle really was a contest between regimental-sized units with their supporting elements."

k. (p 15) Based on "a hasty search," for the Normandy-Northern France area, 40 out of 371 division attack days showed "no" advance (i.e., advances of less than 300 yards). (p 20) For the Siegfried Line area, 17 out of 137 division attack days showed "no" advance.

l. (p 21) "The variations (in Tables 4 and 8) relating terrain type to degree of resistance are so marked that any average [relating rate of advance to degree of resistance] is highly questionable." Apparently Wainstein is here referring to the marked tendency for "heavy" resistance and "close" terrain to occur together. The combined cross-tabulation for all the data in this report is as follows, where we have collapsed the Siegfried Line resistance categories to three:

Terrain class	Degree of resistance			Total
	Heavy	Moderate	Light	
Open	4	0	9	13
Mixed	13	17	14	44
Close	22	8	3	33
Total	39	25	26	90

3. Discussion and Comments:

a. The source table gives advances as "Actual or Daily Average of Advance." These we first converted into total distance advanced by multiplying by the duration of the action in days, and then into an average rate of advance per day by dividing by the number of days. The author's accompanying discussion of the quality of the data is sound, and suggests the care with which these data were assembled. However, in statistical terms, they are a "convenience sample" rather than a random one.

b. The limitation to advances of 300 yards or more is arbitrary and unfortunate. Also, it would have been better had the source given at least a general description of the portion of the division actually participating in the attacks.

c. The association between degree of resistance and terrain reinforces the suspicion that there is a pervasive systematic connection here—possibly due to the defender's tendency whenever possible to select "close/difficult" terrain for his most determined stands. An alternative is to postulate that attackers tend to perceive the resistance as heavy when the terrain is "close," i.e., that the association is caused by the vicious circle alluded to elsewhere. However, the latter postulate does imply a lack of professional objectivity in the attacker's perception of the situation that we are loathe to presume without good cause, although it is well known that even professionals can be victimized by such misperceptions from time to time.

d. In some cases, the original data table's dates spanned by the action are inconsistent with its durations in days. In such cases, we assumed that the dates were accurate and adjusted the durations accordingly. Note that some of the strength values in the original table were estimated, and that in one case the battle casualties are not for the same period as for the advance.

e. The source table gave advances as "Actual or Daily Average of Advance." These we first converted into total distance advanced by multiplying by the duration of the action in days, and then into an average rate of advance per day by dividing by the number of days.

4. Data Table Notes: These apparently are advances by forces that were heavily engaged.

PART 1 OF 4

NORMANDY

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT
1	2nd Inf	Foret de Cerisy	3500	3.20	NU	2	1.60	13-Jun-44	14-Jun-44	Heavy	Foot Close
2	9th Inf	Pont l'Abbe	2500	2.29	NU	2	1.14	14-Jun-44	15-Jun-44	Medium	Foot Close
3	29th Inf	Amy	3000	2.74	NU	1	2.74	16-Jun-44	16-Jun-44	Medium	Foot Close
4	2nd Inf	St. Germain d'Elle	300	0.27	NU	1	0.27	16-Jun-44	16-Jun-44	Heavy	Foot Close
5	79th Inf	Montgardon Ridge	12600	11.52	NU	6	1.92	02-Jul-44	07-Jul-44	Heavy	Foot Close
6	82nd Abn	Poterie Ridge	7350	6.72	NU	3	2.24	03-Jul-44	05-Jul-44	Heavy	Foot Close
7	90th Inf	Monte Caestre	7000	6.40	NU	5	1.28	03-Jul-44	07-Jul-44	Heavy	Foot Open
8	3d Canadian Inf	Caen	8200	7.50	NU	2	3.75	08-Jul-44	09-Jul-44	Heavy	Foot Close
9	30th Inf	Vire R. Bridgehead	2500	2.29	NU	1	2.29	07-Jul-44	07-Jul-44	Heavy	Foot Close
10	83rd Inf	Periers Sector	1800	1.65	NU	2	0.82	04-Jul-44	05-Jul-44	Heavy	Foot Close
11	83rd Inf	Carentan-Periers Road	700	0.64	NU	1	0.64	09-Jul-44	09-Jul-44	Heavy	Foot Close
12	30th Inf	Pont Herbert	3000	2.74	NU	1	2.74	10-Jul-44	11-Jul-44	Heavy	Foot Close
13	2nd Inf	Hill 192	1250	1.23	NU	1	1.23	11-Jul-44	11-Jul-44	Heavy	Foot Close
14	29th Inf	Martinville Ridge	2400	2.19	NU	1	2.19	11-Jul-44	11-Jul-44	Heavy	Foot Close
15	8th Inf	Hill 92	2000	1.83	NU	1	1.83	12-Jul-44	12-Jul-44	Lite	Foot Close
16	79th Inf	Hill 92	2500	2.29	NU	1	2.29	12-Jul-44	12-Jul-44	Lite	Foot Close
17	9th Inf	Les Champs des Losques	1500	1.37	NU	1	1.37	13-Jul-44	13-Jul-44	Medium	Foot Close
18	4th Inf	Toward Periers	3850	3.52	NU	11	0.32	05-Jul-44	15-Jul-44	Heavy	Foot Close
19	2nd Canadian Inf	"Goodwood-Atlantic"	5800	5.30	NU	4	1.33	18-Jul-44	21-Jul-44	Heavy	Foot Open
20	4th Inf	"Cobra"	8000	7.32	NU	1	7.32	26-Jul-44	26-Jul-44	Heavy	Foot Mixed
21	5th Inf	"Cobra"	2000	1.83	NU	1	1.83	26-Jul-44	26-Jul-44	Medium	Foot Mixed
22	2nd Inf	"Cobra"	3000	2.74	NU	1	2.74	26-Jul-44	26-Jul-44	Heavy	Foot Mixed
23	8th Inf	"Cobra"	750	0.69	NU	1	0.69	26-Jul-44	26-Jul-44	Heavy	Foot Mixed
24	2nd Inf	"Cobra"	1000	0.91	NU	1	0.91	27-Jul-44	27-Jul-44	Medium	Foot Mixed
25	5th Inf	"Cobra"	1000	0.91	NU	1	0.91	28-Jul-44	28-Jul-44	Heavy	Foot Mixed
26	2nd Inf	"Cobra"	1300	1.19	NU	1	1.19	30-Jul-44	30-Jul-44	Heavy	Foot Mixed
27	2nd Inf	"Cobra"	4200	3.84	NU	1	3.84	31-Jul-44	31-Jul-44	Lite	Foot Open
28	2nd Inf	Vire	4000	3.66	NU	1	3.66	01-Aug-44	01-Aug-44	Medium	Foot Mixed
29	35th Inf	Torigny-sur-Vire	5500	5.03	NU	1	5.03	01-Aug-44	01-Aug-44	Lite	Foot Mixed
30	1st Inf	Brecey	4000	3.66	NU	1	3.66	02-Aug-44	02-Aug-44	Lite	Foot Mixed
31	2nd Inf	Tessy-sur-Vire	6000	5.49	NU	1	5.49	02-Aug-44	02-Aug-44	Lite	Foot Mixed
32	35th Inf	Tessy-sur-Vire	6000	5.49	NU	1	5.49	02-Aug-44	02-Aug-44	Lite	Foot Mixed
33	9th Inf	Brecey	3000	2.74	NU	1	2.74	03-Aug-44	03-Aug-44	Lite	Foot Mixed
34	2nd Inf	Tessy-sur-Vire	3000	2.74	NU	1	2.74	03-Aug-44	03-Aug-44	Medium	Foot Mixed
35	35th Inf	Tessy-sur-Vire	3000	2.74	NU	1	2.74	03-Aug-44	03-Aug-44	Lite	Foot Mixed
36	2nd Inf	Vire	4400	4.02	NU	1	4.02	04-Aug-44	04-Aug-44	Medium	Foot Mixed
37	2nd Inf	Vire	2000	1.83	NU	1	1.83	05-Aug-44	05-Aug-44	Lite	Foot Mixed
38	2nd Inf	Tinchebray	3800	3.47	NU	1	3.47	09-Aug-44	09-Aug-44	Lite	Foot Mixed
39	29th Inf	Tinchebray	4000	3.66	NU	2	1.83	05-Aug-44	06-Aug-44	Medium	Foot Mixed
40	2nd Canadian Inf	"Totalize"	9700	8.87	NU	1	8.87	07-Aug-44	07-Aug-44	Medium	Foot Mixed
41	28th Inf	Mortain	1000	0.91	NU	1	0.91	11-Aug-44	11-Aug-44	Medium	Foot Mixed
42	29th Inf	Mortain	1000	0.91	NU	1	0.91	11-Aug-44	11-Aug-44	Medium	Foot Mixed
43	29th Inf	Tinchebray	3500	3.20	NU	1	3.20	13-Aug-44	13-Aug-44	Medium	Foot Mixed
44	29th Inf	La Freane Paret	4000	3.66	NU	1	3.66	14-Aug-44	14-Aug-44	Medium	Foot Mixed
45	2nd Inf	Tinchebray	1100	1.01	NU	1	1.01	14-Aug-44	14-Aug-44	Heavy	Foot Mixed

PART 2 OF 4

NORMANDY

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
46	29th Inf	Tinchebray	6000	5.49	NU	1	5.49	15-Aug-44	15-Aug-44	Lite	Foot	Mixed
47	2nd Inf	Tinchebray	5000	4.57	NU	1	4.57	15-Aug-44	15-Aug-44	Lite	Foot	Mixed
48	9th Inf	Briouze Fromental Road	3000	2.74	NU	1	2.74	17-Aug-44	17-Aug-44	Lite	Foot	Mixed
49	2nd Inf	Brest	800	0.73	NU	1	0.73	01-Sep-44	01-Sep-44	Heavy	Foot	Close
50	2nd Inf	Brest	800	0.73	NU	1	0.73	09-Sep-44	09-Sep-44	Heavy	Foot	Close

PART 3 OF 4

NORMANDY

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS	BATTLE CASUALTIES
1	2nd Inf	NA	NA	14,340			473
2	9th Inf	NA	NA	13,110			242
3	29th Inf	NA	NA	13,600			171
4	2nd Inf	NA	NA	13,858			558
5	79th Inf	NA	NA	12,978			2070
6	82nd Abn	NA	NA	6,591		Cas for 4-5 July only	624
7	90th Inf	NA	NA	13,325			2000
8	3d Canadian Inf	NA	NA	17,500	Str Est'd		1194
9	30th Inf	NA	NA	13,872			281
10	83rd Inf	NA	NA	12,528			1855
11	83rd Inf	NA	NA	12,769			122
12	30th Inf	NA	NA	13,185			202
13	2nd Inf	NA	NA	14,824			407
14	29th Inf	NA	NA	14,400			944
15	8th Inf	NA	NA	13,130			344
16	79th Inf	NA	NA	11,641			115
17	9th Inf	NA	NA	14,411			228
18	4th Inf	NA	NA	14,788			2300
19	2nd Canadian Inf	NA	NA	17,500	Str Est'd		1149
20	4th Inf	NA	NA	14,933			115
21	5th Inf	NA	NA	14,215			188
22	2nd Inf	NA	NA	14,468			477
23	8th Inf	NA	NA	13,505			407
24	2nd Inf	NA	NA	14,393			463
25	5th Inf	NA	NA	14,146			216
26	2nd Inf	NA	NA	14,078			185
27	2nd Inf	NA	NA	14,393			100
28	2nd Inf	NA	NA	14,059			255
29	35th Inf	NA	NA	13,157			130
30	1st Inf	NA	NA	14,720			50
31	2nd Inf	NA	NA	13,969			112
32	35th Inf	NA	NA	12,945			214
33	9th Inf	NA	NA	13,717			148
34	2nd Inf	NA	NA	14,295			94
35	35th Inf	NA	NA	12,690			179
36	2nd Inf	NA	NA	14,589			65
37	2nd Inf	NA	NA	14,341			202
38	2nd Inf	NA	NA	14,621			18
39	29th Inf	NA	NA	12,850			407
40	2nd Canadian Inf	NA	NA	17,000	Str Est'd		323
41	28th Inf	NA	NA	12,320			274
42	29th Inf	NA	NA	12,997			184
43	29th Inf	NA	NA	13,311			72
44	29th Inf	NA	NA	13,454			44
45	2nd Inf	NA	NA	13,574			309

NORMANDY

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS	BATTLE CASUALTIES
46	29th Inf	NA	NA	13,651			20
47	2nd Inf	NA	NA	13,779			70
48	9th Inf	NA	NA	13,362			137
49	2nd Inf	NA	NA	13,511			73
50	2nd Inf	NA	NA	14,468			92

ORALFORE

1. Data Source:

- a. Title: Opposed Rates of Advance of Large Forces in Europe (ORALFORE)
- b. Author: Dupuy, Trevor N. and Grace P. Hayes, et al.
- c. Date: 28 August 1972
- d. Organization: Historical Evaluation and Research Organization (HERO), prepared by HERO for the US Army Deputy Chief of Staff for Military Operations (DAMO-PLW) under Contract No. DAHC19-72-C-0015.
- e. Number: AD-902 830
- f. Available From: DTIC

2. Data Description:

a. The ORALFORE work was done (p 1, Introduction) "to provide insight into some of the basic problems of dealing with rates of advance in wargaming by attempting to ascertain whether historical combat experience provides a basis for calculating rates of advance of large forces (divisions and corps); by examining the assumption, accepted as valid in current models and wargames, that rates of advance can be related directly to the force ratios of opposing military forces; and by analyzing the factors that have influenced rates of advance in historical combat ..."

b. Specifically, the ORALFORE data were taken from those tables in the source entitled "Analysis of Rate of Advance of ...," where the ellipsis stands for the name of the unit and the period concerned, e.g., "7th Panzer Division, 10-24 May 1940." These tables give data on the 14 advances listed below.

List of operations considered in ORALFORE

<u>Case no.</u>	<u>Short name</u>	<u>Description</u>
1	7th Panzer	Ardennes-Flanders Offensive, Ger 7th Panzer Division (Rommel), 20-24 May 40
2	XLVII Corps	Orel to Moscow, Ger XLVII Corps, 13-30 Nov 41
3	18th Panzer	Orel to Moscow, Ger 18th Panzer Division, 13-23 Nov 41
4	29th Mtzd	Orel to Moscow, Ger 29th Motorized Division, 23 Nov-3 Dec 41
5	XL Corps	Don River to Caucasus, Ger XL Panzer Corps, 21 Jul-23 Aug 42
6	3d Panzer	Don River to Caucasus, Ger 3d Panzer Division, 21 Jul-23 Aug 41
7	VII Corps	Argentan to Liege, US VII Corps, 13 Aug-12 Sep 44
8	3d Armored	Argentan to Liege, US 3d Armored Division, 13 Aug-12 Sep 44
9	1st Inf	Argentan to Liege, US 1st Infantry Division, 13 Aug-8 Sep 44
10	9th Inf	Argentan to Liege, US 9th Infantry Division, 15 Aug-10 Sep 44
11	XX Corps	Le Mans to Metz, US XX Corps, 14 Aug-13 Sep 44
12	7th Armored	Le Mans to Metz, US 7th Armored Division, 14 Aug-13 Sep 44
13	XII Corps	Saar (Lorraine) Campaign, US XII Corps, 8 Nov-7 Dec 44
14	4th Armored	Saar (Lorraine) Campaign, US 4th Armored Division, 9 Nov-7 Dec 44

c. The source tables contain somewhat more detail than we chose to transcribe into our data base. We omitted those parts presenting force ratios computed in various ways (these depend upon many assumptions, extrapolations, and complicated procedures extraneous to the unvarnished historical record); estimates of how much of each day's advance distance was against negligible, slight, moderate, or intense opposition (the intensity categories are themselves subjective, and rating proportions of a day just compounds the subjectivity); air support present or absent (no evaluation of how much it was); logistics (data too sparse); and situation on flanks (given for advancing forces but not for defending forces).

d. The source gives additional information in its day-by-day narrative accounts of the action, and in its other tables (such as orders of battle, lists of weather conditions, etc.). Unfortunately, it was impractical to compress all of this information into data base form.

e. The source obtained its information from US and German documents in US archives, and selected books. However, "In some instances gaps in data could be filled by interpolation or extrapolation on the basis of professional military or historical experience."

f. "It proved to be impossible to complete the research and analysis for all six operations within the level of effort and the length of time provided. Problems of locating, translating, recording, and analyzing data consumed more time than was provided, with the result that some of the potential sources could not be completely exploited."

g. "The data immediately available for [the German Orel to Moscow Offensive] and [the German XL Panzer Corps, Don River to Caucasus] was not sufficient to permit calculation of the relative combat strengths of the opposing German and Russian forces. Nor was it possible within the limitations of this study to do the research in records of British and French forces necessary to secure accurate statistical information for [the German Ardennes-Flanders Offensive]. Consequently the analyses of these operations are based only on the information shown in the matrix. Also, because of changing corps boundaries, it has been necessary to study [the German Ardennes-Flanders Offensive] only from the point of view of the 7th Panzer Division. In [the German XL Panzer Corps, Don River to Caucasus] translation and detailed exploitation of records of the 3d Panzer Division has not been possible, and the analysis has been made entirely on the basis of XL Corps records."

h. For [the German XL Panzer Corps, Don River to Caucasus] (from p C-61): "No research has been done in Russian sources, and consequently it is not possible to include much information about the Russian strength and performance. Information on close air support on both sides appears to be incomplete. ... For much of this period German casualty data is available only for periods of five to ten days. The daily casualty figures used in the table, except where specific figures are available from other sources, are averages for these periods. ... Since Russian statistics were not available the force ratio has been estimated, with no attempt to do so on a daily basis. ... Since during most of the advance the active elements of the corps were two armored divisions, there is no significant difference in corps rates and division rates, save those caused by averaging of the rates of two different units."

i. "[The] intensity of opposition to advance is the historian's estimate from the narrative [account of the action], and from an assessment of relative casualties suffered on each side, of the tenacity of the defender's resistance to the attacker's advance on any given day. It bears no relationship to force ratio, but rather is an effort to reflect the interaction of those advancing and defending elements which were engaged on a given day—elements which were frequently only a relatively small fraction of the total

forces available on both sides. Intensity of opposition to advance should not be confused with intensity of combat." Intensity of opposition is characterized as: intense, moderate, slight, negligible. But these terms are not defined in an objectively measurable way.

j. Weather is characterized as sunny, dry, dusty, warm, cool, rain, thunderstorm, good, etc. But these terms are not defined in an objectively measurable way.

k. Roadnet mobility is characterized as unlimited cross-country movement, good road net, fair road net, poor road net, impassable terrain. But these terms are not defined in an objectively measurable way.

l. Exceptional obstacles to advance is characterized as river, flooded area, fortified zone, exceptionally effective demolitions, urban area, sabotage by local populace, and desert. But these terms are not defined in an objectively measurable way.

m. Readiness condition is characterized as fresh, tired, weary, exhausted. But these terms are not defined in an objectively measurable way.

n. Defender's posture is characterized as hasty defense, fortified defense, position defense, delay, withdrawal. But these terms are not defined in an objectively measurable way.

3. Discussion and Comments:

a. The ORALFORE data were also used by U. Böddeker and J. Pantke in "Auswertung Historischer Konflikte zur Bestimmung von Vormarschräten [Evaluation of Historical Conflict for Determining Rates of Advance]," M-ZO 4013/08, Industrieanlagen-Betriebsgesellschaft mbH (IABG), Trier, West Germany, 20 April 1978.

b. Force ratios for the Ardennes-Flanders, Orel to Moscow, Don River to Caucasus, and Argentan to Liege operations were not evaluated within the scope of the ORALFORE work. The source states that "For Operations [US XX Corps, Le Mans to Metz] and [US XII Corps, Saar(Lorraine) Campaign] [the force ratios, relative combat effectiveness, relative mobility effectiveness, and intensity of combat] have been calculated by the Quantified Judgment Method (QJM)." Use and interpretation of the data on these operations should take this fact into account.

c. The meaning of many of the judgmental factors is uncertain. The ORALFORE report provides no objectively measurable criteria for such concepts as intensity of opposition, suitability of the weather for armor operations, quality of the roadnet, etc.

d. What ORALFORE intended by a "pause" is unclear. In at least one case (VII Corps), advances of 48 km are credited on each of 5 successive days even though *both* the attacker and the defender were categorized as having a pause (P) mission/posture on each of those days.

e. Observe that, from a statistical point of view, some of the information is correlated (i.e., partly redundant). This occurs because information on advances by divisions within a corps, as well as information on the corps' advance, are tabulated.

f. The characterization of intensity of opposition and of roadnet mobility may be circular. For example, a judgment that the roadnet was inadequate may inadvertently be influenced by the perceived slow rate of advance as much or more than by the "inherent" characteristics of the road net. Such vicious circles tend to crop up more often when characterizations are judgmental than when they are objectively measurable. The evaluation of readiness condition and defender's posture may also be circular.

g. The Soviet portions of these data can be compared to data on Soviet advances given elsewhere. See, for example, portions of the data bases CDB90, EASTFRON, GLANTZ, RADZIEV, RECORD, SAVKIN, and ROWLAND. See also HERO Combat Data Subscription Service (Volume I, No. 1, 1975; Volume II, No. 1, Winter 1976; Volume II, No. 3, 1977; and Volume II, No. 4, 1978). See also Losik, O. A. (ed.), "Organization and Tactical Employment of Soviet Tank Forces During the Great Patriotic War," Military Publishing House, Ministry of Defense, USSR, Moscow, 1979.

4. Data Table Notes:

a. Throughout the ORALFORE data base table the following abbreviations apply: P = Pause, Y = Yes, U = Unknown, NA = Not applicable, NU = Not used, NR = Not recorded in the ORALFORE report

b. WEATHER ARMOR = Judgment of suitability of weather for armor operations

c. WEATHER AIR = Judgment of suitability of weather for air operations

d. TERRAIN = Judgment of terrain mobility

e. ROADNET = Judgment of roadnet suitability for mobility

f. OBSTACLES = Obstacles to advance, coded as follows:
DM = Exceptionally effective demolitions, DS = Desert, FL = Flooded area, FZ = Fortified zone, R = River, SA = Sabotage by local populace, UR = Urban area

g. OPP'N INT'Y = Intensity of opposition to advance, coded as follows:
I = Intense, M = Moderate, S = Slight, N = Negligible

h. ATK COND'N = Attacker's readiness condition, coded as follows:
F = Fresh, T = Tired, W = Weary, E = Exhausted

i. ATK MISS'N = Attacker's posture/mission, coded as follows. (Entries of ranges in ORALFORE coded as fractions. I.e., ORALFORE entry 2-3 coded as 2.5.):
1 = Unlimited, 2 = Related to specific objectives or contingencies, 3 = Related to adjacent unit's advance, 4 = Limited by higher authority control, 5 = Other

j. ATK CAS% = Attacker's losses in percent

k. DEF COND'N = Defender's readiness condition, coded as follows:
F = Fresh, T = Tired, W = Weary, E = Exhausted

l. DEF MISS'N = Defender's posture/mission, coded as follows:
WD = Withdrawal, HD = Hasty defense, FD = Fortified defense, PD = Position defense, DL = Delay

m. DEF CAS% = Defender's casualties in percent

ORALFORE

PART 1 OF 16

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DATE	DISTANCE (KM)	WEATHER ARMOR	WEATHER AIR	TERRAIN	ROADNET	OBSTACLES	OPP/N	ATK INT/Y COND/N
1	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	10-May-40	42.0	1.0	0.9	0.7	0.7	NR	N	F
2	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	11-May-40	32.0	1.0	0.9	0.7	0.8	NR	N	F
3	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	12-May-40	36.0	1.0	0.9	0.7	0.9	NR	S	F
4	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	13-May-40	2.0	NR	0.9	0.8	0.9	NR	I	F
5	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	14-May-40	14.0	1.0	0.9	0.8	0.9	NR	M	F
6	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	15-May-40	27.0	1.0	0.9	0.8	0.9	NR	S	T
7	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	16-May-40	38.0	1.0	0.9	0.8	0.9	NR	S-N	T
8	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	17-May-40	30.0	1.0	0.9	0.8	0.9	NR	S	T
9	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	18-May-40	27.0	NR	0.9	0.8	0.9	NR	M	T
10	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	19-May-40	3.0	1.0	0.9	0.8	0.9	NR	P-N	P
11	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	20-May-40	33.0	1.0	0.9	0.8	0.9	NR	M	T
12	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	21-May-40	17.0	0.9	0.9	0.9	0.9	NR	I-S	T
13	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	22-May-40	9.0	0.8	0.9	0.9	0.9	NR	M	T
14	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	23-May-40	10.0	1.0	0.9	0.9	0.9	NR	S	T
15	Ardennes-Flanders Offensive	Ger 7th Panzer Division (Rommel)	24-May-40	9.0	1.0	0.9	0.9	0.9	NR	M	T
16	Orel to Moscow	Ger XLVII Corps	13-Nov-41	60.0	0.6	1.0	0.8	0.5	NR	N	F
17	Orel to Moscow	Ger XLVII Corps	14-Nov-41	25.0	0.8	1.0	0.8	0.5	NR	S	F
18	Orel to Moscow	Ger XLVII Corps	15-Nov-41	2.0	0.8	1.0	0.8	0.5	NR	I	F
19	Orel to Moscow	Ger XLVII Corps	16-Nov-41	6.0	0.8	1.0	0.8	0.5	NR	I	T
20	Orel to Moscow	Ger XLVII Corps	17-Nov-41	1.0	0.8	1.0	0.8	0.5	NR	I	T
21	Orel to Moscow	Ger XLVII Corps	18-Nov-41	5.0	0.8	1.0	0.8	0.5	NR	M	T
22	Orel to Moscow	Ger XLVII Corps	19-Nov-41	11.0	0.8	1.0	0.8	0.5	NR	M	T
23	Orel to Moscow	Ger XLVII Corps	20-Nov-41	19.0	0.5	1.0	0.8	0.5	NR	I-N	T
24	Orel to Moscow	Ger XLVII Corps	21-Nov-41	20.0	0.6	1.0	0.8	0.5	NR	M	T
25	Orel to Moscow	Ger XLVII Corps	22-Nov-41	18.0	0.6	1.0	0.8	0.5	NR	M	T
26	Orel to Moscow	Ger XLVII Corps	23-Nov-41	15.0	0.6	1.0	0.8	0.5	NR	M	T
27	Orel to Moscow	Ger XLVII Corps	24-Nov-41	28.0	0.6	1.0	0.8	0.5	NR	S	T
28	Orel to Moscow	Ger XLVII Corps	25-Nov-41	26.0	0.6	1.0	0.8	0.5	NR	S	T
29	Orel to Moscow	Ger XLVII Corps	26-Nov-41	10.0	0.6	1.0	0.8	0.5	NR	M	W
30	Orel to Moscow	Ger XLVII Corps	27-Nov-41	4.0	0.8	1.0	0.8	0.5	NR	M	W
31	Orel to Moscow	Ger XLVII Corps	28-Nov-41	8.0	0.8	1.0	0.8	0.5	NR	S	W
32	Orel to Moscow	Ger XLVII Corps	29-Nov-41	8.0	0.6	1.0	0.8	0.5	NR	S	W
33	Orel to Moscow	Ger XLVII Corps	30-Nov-41	20.0	0.6	1.0	0.8	0.5	NR	M-N	E
34	Orel to Moscow	Ger 18th Panzer Division	13-Nov-41	60.0	0.6	1.0	0.8	0.7	NR	N	F
35	Orel to Moscow	Ger 18th Panzer Division	14-Nov-41	25.0	0.8	1.0	0.8	0.7	NR	S	F
36	Orel to Moscow	Ger 18th Panzer Division	15-Nov-41	2.0	0.8	1.0	0.8	0.7	NR	I	F
37	Orel to Moscow	Ger 18th Panzer Division	16-Nov-41	6.0	0.9	1.0	0.8	0.7	NR	I	T
38	Orel to Moscow	Ger 18th Panzer Division	17-Nov-41	1.0	0.8	1.0	0.8	0.7	NR	I	T
39	Orel to Moscow	Ger 18th Panzer Division	18-Nov-41	5.0	0.8	1.0	0.8	0.7	NR	M	T
40	Orel to Moscow	Ger 18th Panzer Division	19-Nov-41	1.0	0.8	1.0	0.8	0.7	NR	M	T
41	Orel to Moscow	Ger 18th Panzer Division	20-Nov-41	10.0	0.5	1.0	0.8	0.7	NR	I-N	P
42	Orel to Moscow	Ger 18th Panzer Division	21-Nov-41	1.0	0.6	1.0	0.8	0.7	NR	I-M	T
43	Orel to Moscow	Ger 18th Panzer Division	22-Nov-41	5.0	0.6	1.0	0.8	0.7	NR	I-M	T
44	Orel to Moscow	Ger 18th Panzer Division	23-Nov-41	5.0	0.6	1.0	0.8	0.7	NR	M	W
45	Orel to Moscow	Ger 29th Motorized Division	23-Nov-41	20.0	0.6	1.0	0.8	0.7	NR	S	F
46	Orel to Moscow	Ger 29th Motorized Division	24-Nov-41	25.0	0.6	1.0	0.8	0.7	NR	S-M	F

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ORALFORE

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DATE	DISTANCE (KM)	WEATHER ARMOR	WEATHER AIR	TERRAIN	ROADNET	OBSTACLES	OPP/N	ATK INT'Y COND/N
47	Orel to Moscow	Ger 29th Motorized Division	25-Nov-41	20.0	0.6	1.0	0.8	0.7	NR	S-I	F
48	Orel to Moscow	Ger 29th Motorized Division	26-Nov-41	9.0	0.6	1.0	0.8	0.7	NR	M-I	T
49	Orel to Moscow	Ger 29th Motorized Division	27-Nov-41	5.0	0.8	1.0	0.8	0.7	NR	M-I	T
50	Orel to Moscow	Ger 29th Motorized Division	28-Nov-41	8.0	0.8	1.0	0.8	0.7	NR	S	T
51	Orel to Moscow	Ger 29th Motorized Division	29-Nov-41	8.0	0.6	1.0	0.8	0.7	NR	S	T
52	Orel to Moscow	Ger 29th Motorized Division	30-Nov-41	20.0	0.6	1.0	0.8	0.7	NR	M-N	W
53	Orel to Moscow	Ger 29th Motorized Division	01-Dec-41	P	0.8	1.0	0.8	0.7	NR	P	P
54	Orel to Moscow	Ger 29th Motorized Division	02-Dec-41	10.0	0.8	1.0	0.8	0.7	NR	S	W
55	Orel to Moscow	Ger 29th Motorized Division	03-Dec-41	4.0	0.6	1.0	0.8	0.7	NR	M	W
56	Don River to Caucasus	Ger XL Panzerkorps	21-Jul-42	2.0	1.0	1.0	0.9	0.7	R	M	F
57	Don River to Caucasus	Ger XL Panzerkorps	22-Jul-42	8.0	1.0	1.0	0.9	0.7	R	S	F
58	Don River to Caucasus	Ger XL Panzerkorps	23-Jul-42	14.0	0.9	1.0	0.9	0.7	R	S	F
59	Don River to Caucasus	Ger XL Panzerkorps	24-Jul-42	P	1.0	1.0	0.9	0.7	R	P	P
60	Don River to Caucasus	Ger XL Panzerkorps	25-Jul-42	P	0.9	1.0	0.9	0.7	R	P	P
61	Don River to Caucasus	Ger XL Panzerkorps	26-Jul-42	7.0	1.0	1.0	0.9	0.7	R	S	F
62	Don River to Caucasus	Ger XL Panzerkorps	27-Jul-42	14.0	1.0	1.0	0.9	0.7	R	M	F
63	Don River to Caucasus	Ger XL Panzerkorps	28-Jul-42	20.0	1.0	1.0	0.9	0.7	NR	S	F
64	Don River to Caucasus	Ger XL Panzerkorps	29-Jul-42	15.0	1.0	1.0	0.9	0.7	NR	M-S	T
65	Don River to Caucasus	Ger XL Panzerkorps	30-Jul-42	20.0	1.0	1.0	0.9	0.7	R	S	T
66	Don River to Caucasus	Ger XL Panzerkorps	31-Jul-42	8.0	1.0	1.0	0.9	0.7	R	S	T
67	Don River to Caucasus	Ger XL Panzerkorps	01-Aug-42	45.0	1.0	1.0	1.0	0.7	NR	S-N	T
68	Don River to Caucasus	Ger XL Panzerkorps	02-Aug-42	65.0	1.0	1.0	1.0	0.7	NR	N	T
69	Don River to Caucasus	Ger XL Panzerkorps	03-Aug-42	65.0	1.0	1.0	1.0	0.7	NR	N	T
70	Don River to Caucasus	Ger XL Panzerkorps	04-Aug-42	P	1.0	1.0	1.0	0.7	NR	P	P
71	Don River to Caucasus	Ger XL Panzerkorps	05-Aug-42	30.0	1.0	1.0	1.0	0.7	NR	N	T
72	Don River to Caucasus	Ger XL Panzerkorps	06-Aug-42	6.0	1.0	1.0	1.0	0.7	NR	M	T
73	Don River to Caucasus	Ger XL Panzerkorps	07-Aug-42	30.0	1.0	1.0	1.0	0.7	NR	P-N	T
74	Don River to Caucasus	Ger XL Panzerkorps	08-Aug-42	95.0	1.0	1.0	1.0	0.5	NR	N	T
75	Don River to Caucasus	Ger XL Panzerkorps	09-Aug-42	26.0	1.0	1.0	0.9	0.5	NR	M-N	T
76	Don River to Caucasus	Ger XL Panzerkorps	10-Aug-42	3.0	1.0	1.0	0.8	0.5	NR	I	T
77	Don River to Caucasus	Ger XL Panzerkorps	11-Aug-42	10.0	1.0	1.0	0.8	0.5	NR	M	T
78	Don River to Caucasus	Ger XL Panzerkorps	12-Aug-42	6.0	1.0	1.0	0.7	0.5	NR	S	T
79	Don River to Caucasus	Ger XL Panzerkorps	13-Aug-42	22.0	1.0	1.0	0.7	0.5	NR	S	T
80	Don River to Caucasus	Ger XL Panzerkorps	14-Aug-42	20.0	1.0	1.0	0.7	0.5	NR	S	T
81	Don River to Caucasus	Ger XL Panzerkorps	15-Aug-42	5.0	1.0	1.0	0.6	0.5	R	M	T
82	Don River to Caucasus	Ger XL Panzerkorps	16-Aug-42	25.0	0.9	1.0	0.6	0.5	R	S	T
83	Don River to Caucasus	Ger XL Panzerkorps	17-Aug-42	3.0	1.0	1.0	0.6	0.5	R	S	T
84	Don River to Caucasus	Ger XL Panzerkorps	18-Aug-42	2.0	1.0	1.0	0.6	0.5	R	I	T
85	Don River to Caucasus	Ger XL Panzerkorps	19-Aug-42	1.0	0.8	1.0	0.6	0.5	R	I	T
86	Don River to Caucasus	Ger XL Panzerkorps	20-Aug-42	36.0	1.0	1.0	0.6	0.5	R	I-N	T
87	Don River to Caucasus	Ger XL Panzerkorps	21-Aug-42	3.0	0.9	1.0	0.6	0.5	R	I	W
88	Don River to Caucasus	Ger XL Panzerkorps	22-Aug-42	0.0	0.9	1.0	0.6	0.5	R	I	W
89	Don River to Caucasus	Ger XL Panzerkorps	23-Aug-42	33.0	1.0	1.0	0.6	0.5	NR	M-N	W
90	Don River to Caucasus	Ger 3rd Panzer Division	21-Jul-42	23.0	1.0	1.0	0.9	0.7	R	N	F
91	Don River to Caucasus	Ger 3rd Panzer Division	22-Jul-42	10.0	1.0	1.0	0.9	0.7	R	M-S	F
92	Don River to Caucasus	Ger 3rd Panzer Division	23-Jul-42	28.0	0.9	1.0	0.9	0.7	R	S	F

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ORALFORE

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DATE	DISTANCE (KM)	WEATHER	ARMOR	AIR	TERRAIN	ROADNET	OBSTACLES	OPP'N	ATK INT'Y COND'N
93	Don River to Caucasus	Ger 3rd Panzer Division	24-Jul-42	5.0	1.0	1.0	1.0	0.9	0.7	R	M	F
94	Don River to Caucasus	Ger 3rd Panzer Division	25-Jul-42	P	0.9	1.0	1.0	0.9	0.7	R	P	P
95	Don River to Caucasus	Ger 3rd Panzer Division	26-Jul-42	P	1.0	1.0	1.0	0.9	0.7	R	P	P
96	Don River to Caucasus	Ger 3rd Panzer Division	27-Jul-42	12.0	1.0	1.0	1.0	0.9	0.7	R	M-S	F
97	Don River to Caucasus	Ger 3rd Panzer Division	28-Jul-42	40.0	1.0	1.0	1.0	0.9	0.7	NR	N	F
98	Don River to Caucasus	Ger 3rd Panzer Division	29-Jul-42	30.0	1.0	1.0	1.0	0.9	0.7	NR	M-N	T
99	Don River to Caucasus	Ger 3rd Panzer Division	30-Jul-42	10.0	1.0	1.0	1.0	0.9	0.7	R	S	T
100	Don River to Caucasus	Ger 3rd Panzer Division	31-Jul-42	4.0	1.0	1.0	1.0	0.9	0.7	R	M	T
101	Don River to Caucasus	Ger 3rd Panzer Division	01-Aug-42	45.0	1.0	1.0	1.0	1.0	0.7	NR	M-N	T
102	Don River to Caucasus	Ger 3rd Panzer Division	02-Aug-42	90.0	1.0	1.0	1.0	1.0	0.7	NR	N	T
103	Don River to Caucasus	Ger 3rd Panzer Division	03-Aug-42	70.0	1.0	1.0	1.0	1.0	0.7	NR	N	T
104	Don River to Caucasus	Ger 3rd Panzer Division	04-Aug-42	P	1.0	1.0	1.0	1.0	0.7	NR	P	P
105	Don River to Caucasus	Ger 3rd Panzer Division	05-Aug-42	60.0	1.0	1.0	1.0	1.0	0.7	NR	N	T
106	Don River to Caucasus	Ger 3rd Panzer Division	06-Aug-42	12.0	1.0	1.0	1.0	1.0	0.7	NR	S	T
107	Don River to Caucasus	Ger 3rd Panzer Division	07-Aug-42	P	1.0	1.0	1.0	1.0	0.7	NR	P	P
108	Don River to Caucasus	Ger 3rd Panzer Division	08-Aug-42	110.0	1.0	1.0	1.0	1.0	0.5	NR	N	T
109	Don River to Caucasus	Ger 3rd Panzer Division	09-Aug-42	36.0	1.0	1.0	1.0	0.9	0.5	NR	M-N	T
110	Don River to Caucasus	Ger 3rd Panzer Division	10-Aug-42	4.0	1.0	1.0	1.0	0.8	0.5	NR	I	T
111	Don River to Caucasus	Ger 3rd Panzer Division	11-Aug-42	6.0	1.0	1.0	1.0	0.8	0.5	NR	M	T
112	Don River to Caucasus	Ger 3rd Panzer Division	12-Aug-42	6.0	1.0	1.0	1.0	0.7	0.5	NR	S	T
113	Don River to Caucasus	Ger 3rd Panzer Division	13-Aug-42	14.0	1.0	1.0	1.0	0.7	0.5	NR	I-S	T
114	Don River to Caucasus	Ger 3rd Panzer Division	14-Aug-42	P	1.0	1.0	1.0	0.7	0.5	NR	P	P
115	Don River to Caucasus	Ger 3rd Panzer Division	15-Aug-42	6.0	1.0	1.0	1.0	0.6	0.5	R	S	T
116	Don River to Caucasus	Ger 3rd Panzer Division	16-Aug-42	22.0	0.9	1.0	1.0	0.6	0.5	R	M-N	T
117	Don River to Caucasus	Ger 3rd Panzer Division	17-Aug-42	P	1.0	1.0	1.0	0.6	0.5	R	P	P
118	Don River to Caucasus	Ger 3rd Panzer Division	18-Aug-42	P	1.0	1.0	1.0	0.6	0.5	R	P	P
119	Don River to Caucasus	Ger 3rd Panzer Division	19-Aug-42	P	0.8	1.0	1.0	0.6	0.5	R	P	P
120	Don River to Caucasus	Ger 3rd Panzer Division	20-Aug-42	70.0	1.0	1.0	1.0	0.6	0.5	R	N	T
121	Don River to Caucasus	Ger 3rd Panzer Division	21-Aug-42	P	0.9	1.0	1.0	0.6	0.5	R	P	P
122	Don River to Caucasus	Ger 3rd Panzer Division	22-Aug-42	P	0.9	1.0	1.0	0.6	0.5	R	P	P
123	Don River to Caucasus	Ger 3rd Panzer Division	23-Aug-42	60.0	1.0	1.0	1.0	0.6	0.5	NR	M-N	T
124	Argentan to Liege	US VII Corps	13-Aug-44	26.0	1.0	1.0	1.0	0.9	0.9	NR	S	F
125	Argentan to Liege	US VII Corps	14-Aug-44	4.0	1.0	1.0	1.0	0.9	0.9	NR	M	F
126	Argentan to Liege	US VII Corps	15-Aug-44	4.0	1.0	1.0	1.0	0.9	0.9	NR	M	T
127	Argentan to Liege	US VII Corps	16-Aug-44	6.0	1.0	1.0	1.0	0.9	0.9	NR	M	T
128	Argentan to Liege	US VII Corps	17-Aug-44	3.0	1.0	1.0	1.0	0.9	0.9	NR	M	T
129	Argentan to Liege	US VII Corps	18-Aug-44	P	1.0	1.0	1.0	NR	0.9	NR	P	P
130	Argentan to Liege	US VII Corps	19-Aug-44	P	0.9	1.0	1.0	NR	0.9	NR	P	P
131	Argentan to Liege	US VII Corps	20-Aug-44	P	0.9	1.0	1.0	NR	0.9	NR	P	P
132	Argentan to Liege	US VII Corps	21-Aug-44	48.0	0.7	1.0	1.0	NR	0.9	NR	P-N	P
133	Argentan to Liege	US VII Corps	22-Aug-44	48.0	0.8	1.0	1.0	NR	0.9	NR	P-N	P
134	Argentan to Liege	US VII Corps	23-Aug-44	48.0	0.8	1.0	1.0	NR	0.9	NR	P-N	P
135	Argentan to Liege	US VII Corps	24-Aug-44	48.0	0.8	1.0	1.0	NR	0.9	NR	P-N	P
136	Argentan to Liege	US VII Corps	25-Aug-44	48.0	1.0	1.0	1.0	NR	0.9	NR	P-N	P
137	Argentan to Liege	US VII Corps	26-Aug-44	35.0	1.0	1.0	1.0	0.8	0.9	R	N	F
138	Argentan to Liege	US VII Corps	27-Aug-44	25.0	1.0	1.0	1.0	0.8	0.9	R	N	F

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DATE	DISTANCE (KM)	WEATHER	ARMOR	AIR	TERRAIN	ROADNET	OBSTACLES	OPP'N	ATK	INT'Y	COND'N
139	Argentan to Liege	US VII Corps	28-Aug-44	63.0	1.0	1.0	1.0	0.8	0.9	NR	N	F		
140	Argentan to Liege	US VII Corps	29-Aug-44	19.0	0.9	1.0	1.0	0.8	0.9	R	N	F		
141	Argentan to Liege	US VII Corps	30-Aug-44	16.0	1.0	1.0	1.0	0.8	0.9	NR	S	F		
142	Argentan to Liege	US VII Corps	31-Aug-44	29.0	0.8	1.0	1.0	0.8	0.9	NR	N	T		
143	Argentan to Liege	US VII Corps	01-Sep-44	25.0	1.0	1.0	1.0	0.8	0.9	NR	S	T		
144	Argentan to Liege	US VII Corps	02-Sep-44	35.0	1.0	1.0	1.0	0.8	0.9	NR	S	T		
145	Argentan to Liege	US VII Corps	03-Sep-44	16.0	1.0	1.0	1.0	0.8	0.9	NR	S	T		
146	Argentan to Liege	US VII Corps	04-Sep-44	35.0	1.0	1.0	1.0	0.8	0.9	NR	S	T		
147	Argentan to Liege	US VII Corps	05-Sep-44	8.0	1.0	1.0	1.0	0.8	0.9	R	M	T		
148	Argentan to Liege	US VII Corps	06-Sep-44	14.0	0.9	1.0	1.0	0.8	0.9	R	M	T		
149	Argentan to Liege	US VII Corps	07-Sep-44	20.0	0.8	1.0	1.0	0.8	0.9	UR	S	T		
150	Argentan to Liege	US VII Corps	08-Sep-44	22.0	0.8	1.0	1.0	0.8	0.9	R	S	T		
151	Argentan to Liege	US VII Corps	09-Sep-44	7.0	1.0	1.0	1.0	0.8	0.9	R	M	T		
152	Argentan to Liege	US VII Corps	10-Sep-44	10.0	1.0	1.0	1.0	0.8	0.9	NR	S	T		
153	Argentan to Liege	US VII Corps	11-Sep-44	8.0	1.0	1.0	1.0	0.8	0.9	NR	M	T		
154	Argentan to Liege	US VII Corps	12-Sep-44	5.0	1.0	1.0	1.0	0.8	0.9	FZ	M	T		
155	Argentan to Liege	US 3d Armored Division	13-Aug-44	35.0	1.0	1.0	1.0	0.9	0.9	NR	S	T		
156	Argentan to Liege	US 3d Armored Division	14-Aug-44	2.0	1.0	1.0	1.0	0.9	0.9	NR	I	T		
157	Argentan to Liege	US 3d Armored Division	15-Aug-44	2.0	1.0	1.0	1.0	0.9	0.9	NR	I	T		
158	Argentan to Liege	US 3d Armored Division	16-Aug-44	6.0	1.0	1.0	1.0	0.9	0.9	NR	M	T		
159	Argentan to Liege	US 3d Armored Division	17-Aug-44	3.0	1.0	1.0	1.0	0.9	0.9	NR	I	T		
160	Argentan to Liege	US 3d Armored Division	18-Aug-44	P	1.0	1.0	1.0	NR	0.9	NR	P	P		
161	Argentan to Liege	US 3d Armored Division	19-Aug-44	P	0.9	1.0	1.0	NR	0.9	NR	P	P		
162	Argentan to Liege	US 3d Armored Division	20-Aug-44	P	0.9	1.0	1.0	NR	0.9	NR	P	P		
163	Argentan to Liege	US 3d Armored Division	21-Aug-44	P	0.7	1.0	1.0	NR	0.9	NR	P	P		
164	Argentan to Liege	US 3d Armored Division	22-Aug-44	110.0	0.8	1.0	1.0	NR	0.9	NR	P-N	P		
165	Argentan to Liege	US 3d Armored Division	23-Aug-44	P	0.8	1.0	1.0	NR	0.9	NR	P	P		
166	Argentan to Liege	US 3d Armored Division	24-Aug-44	130.0	0.8	1.0	1.0	NR	0.9	NR	P-N	P		
167	Argentan to Liege	US 3d Armored Division	25-Aug-44	P	1.0	1.0	1.0	NR	0.9	NR	P	P		
168	Argentan to Liege	US 3d Armored Division	26-Aug-44	35.0	1.0	1.0	1.0	0.8	0.9	R	N	F		
169	Argentan to Liege	US 3d Armored Division	27-Aug-44	25.0	1.0	1.0	1.0	0.8	0.9	R	N	F		
170	Argentan to Liege	US 3d Armored Division	28-Aug-44	63.0	1.0	1.0	1.0	0.8	0.9	NR	N	F		
171	Argentan to Liege	US 3d Armored Division	29-Aug-44	19.0	0.9	1.0	1.0	0.8	0.9	R	N	F		
172	Argentan to Liege	US 3d Armored Division	30-Aug-44	16.0	1.0	1.0	1.0	0.8	0.9	NR	S	T		
173	Argentan to Liege	US 3d Armored Division	31-Aug-44	28.0	0.8	1.0	1.0	0.8	0.9	NR	N	T		
174	Argentan to Liege	US 3d Armored Division	01-Sep-44	22.0	1.0	1.0	1.0	0.8	0.9	NR	S	T		
175	Argentan to Liege	US 3d Armored Division	02-Sep-44	40.0	1.0	1.0	1.0	0.8	0.9	NR	N	T		
176	Argentan to Liege	US 3d Armored Division	03-Sep-44	P	1.0	1.0	1.0	0.8	0.9	NR	P	P		
177	Argentan to Liege	US 3d Armored Division	04-Sep-44	45.0	1.0	1.0	1.0	0.8	0.9	NR	N	T		
178	Argentan to Liege	US 3d Armored Division	05-Sep-44	10.0	1.0	1.0	1.0	0.8	0.9	R	S	T		
179	Argentan to Liege	US 3d Armored Division	06-Sep-44	28.0	0.9	1.0	1.0	0.8	0.9	NR	S	T		
180	Argentan to Liege	US 3d Armored Division	07-Sep-44	26.0	0.8	1.0	1.0	0.8	0.9	UR	S	T		
181	Argentan to Liege	US 3d Armored Division	08-Sep-44	3.0	0.8	1.0	1.0	0.8	0.9	NR	P-N	P		
182	Argentan to Liege	US 3d Armored Division	09-Sep-44	26.0	1.0	1.0	1.0	0.8	0.9	R	S	T		
183	Argentan to Liege	US 3d Armored Division	10-Sep-44	3.0	1.0	1.0	1.0	0.8	0.9	NR	N	T		
184	Argentan to Liege	US 3d Armored Division	11-Sep-44	11.0	1.0	1.0	1.0	0.8	0.9	NR	N	T		

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DATE	DISTANCE (KM)	WEATHER ARMOR	WEATHER AIR	TERRAIN	ROADNET	OBSTACLES	OPP'N	ATK INT'Y COND'N
185	Argentan to Liege	US 3d Armored Division	12-Sep-44	8.0	1.0	1.0	0.8	0.9	FZ	S	T
186	Argentan to Liege	US 1st Infantry Division	13-Aug-44	20.0	1.0	1.0	0.9	0.9	NR	S-N	F
187	Argentan to Liege	US 1st Infantry Division	14-Aug-44	6.0	1.0	1.0	0.9	0.9	NR	M	F
188	Argentan to Liege	US 1st Infantry Division	15-Aug-44	6.0	1.0	1.0	0.9	0.9	NR	M	F
189	Argentan to Liege	US 1st Infantry Division	16-Aug-44	4.0	1.0	1.0	0.9	0.9	NR	M	F
190	Argentan to Liege	US 1st Infantry Division	17-Aug-44	P	1.0	1.0	0.9	0.9	NR	P	P
191	Argentan to Liege	US 1st Infantry Division	18-Aug-44	P	1.0	1.0	NR	0.9	NR	P	P
192	Argentan to Liege	US 1st Infantry Division	19-Aug-44	P	0.9	1.0	NR	0.9	NR	P	P
193	Argentan to Liege	US 1st Infantry Division	20-Aug-44	P	0.9	1.0	NR	0.9	NR	P	P
194	Argentan to Liege	US 1st Infantry Division	21-Aug-44	P	0.7	1.0	NR	0.9	NR	P	P
195	Argentan to Liege	US 1st Infantry Division	22-Aug-44	P	0.8	1.0	NR	0.9	NR	P	P
196	Argentan to Liege	US 1st Infantry Division	23-Aug-44	P	0.8	1.0	NR	0.9	NR	P	F
197	Argentan to Liege	US 1st Infantry Division	24-Aug-44	150.0	0.8	1.0	NR	0.9	NR	P-N	F
198	Argentan to Liege	US 1st Infantry Division	25-Aug-44	90.0	1.0	1.0	NR	0.9	NR	P-N	F
199	Argentan to Liege	US 1st Infantry Division	26-Aug-44	P	1.0	1.0	0.8	0.9	NR	P	F
200	Argentan to Liege	US 1st Infantry Division	27-Aug-44	50.0	1.0	1.0	0.8	0.9	R	P-N	F
201	Argentan to Liege	US 1st Infantry Division	28-Aug-44	30.0	1.0	1.0	0.8	0.9	NR	P-N	F
202	Argentan to Liege	US 1st Infantry Division	29-Aug-44	40.0	0.9	1.0	0.8	0.9	NR	P-N	F
203	Argentan to Liege	US 1st Infantry Division	30-Aug-44	30.0	1.0	1.0	0.8	0.9	NR	P-N	F
204	Argentan to Liege	US 1st Infantry Division	31-Aug-44	30.0	0.8	1.0	0.8	0.9	NR	P-N	F
205	Argentan to Liege	US 1st Infantry Division	01-Sep-44	33.0	1.0	1.0	0.8	0.9	NR	N	F
206	Argentan to Liege	US 1st Infantry Division	02-Sep-44	40.0	1.0	1.0	0.8	0.9	NR	S	F
207	Argentan to Liege	US 1st Infantry Division	03-Sep-44	22.0	1.0	1.0	0.8	0.9	NR	M	F
208	Argentan to Liege	US 1st Infantry Division	04-Sep-44	15.0	1.0	1.0	0.8	0.9	NR	M	F
209	Argentan to Liege	US 1st Infantry Division	05-Sep-44	NR	1.0	1.0	0.8	0.9	NR	M	F
210	Argentan to Liege	US 1st Infantry Division	06-Sep-44	38.0	0.9	1.0	0.8	0.9	NR	S-N	T
211	Argentan to Liege	US 1st Infantry Division	07-Sep-44	30.0	0.8	1.0	0.8	0.9	NR	S-N	T
212	Argentan to Liege	US 1st Infantry Division	08-Sep-44	55.0	0.8	1.0	0.8	0.9	R	N	T
213	Argentan to Liege	US 9th Infantry Division	15-Aug-44	6.0	1.0	1.0	0.9	0.9	NR	S	F
214	Argentan to Liege	US 9th Infantry Division	16-Aug-44	8.0	1.0	1.0	0.9	0.9	NR	M	F
215	Argentan to Liege	US 9th Infantry Division	17-Aug-44	3.0	1.0	1.0	0.9	0.9	NR	M	F
216	Argentan to Liege	US 9th Infantry Division	18-Aug-44	P	1.0	1.0	NR	0.9	NR	P	P
217	Argentan to Liege	US 9th Infantry Division	19-Aug-44	P	0.9	1.0	NR	0.9	NR	P	P
218	Argentan to Liege	US 9th Infantry Division	20-Aug-44	P	0.9	1.0	NR	0.9	NR	P	P
219	Argentan to Liege	US 9th Infantry Division	21-Aug-44	60.0	0.7	1.0	NR	0.9	NR	P-N	F
220	Argentan to Liege	US 9th Infantry Division	22-Aug-44	P	0.8	1.0	NR	0.9	NR	P	F
221	Argentan to Liege	US 9th Infantry Division	23-Aug-44	50.0	0.8	1.0	NR	0.9	NR	P-N	F
222	Argentan to Liege	US 9th Infantry Division	24-Aug-44	P	0.8	1.0	NR	0.9	NR	P	F
223	Argentan to Liege	US 9th Infantry Division	25-Aug-44	130.0	1.0	1.0	NR	0.9	NR	P-N	F
224	Argentan to Liege	US 9th Infantry Division	26-Aug-44	P	1.0	1.0	0.8	0.9	NR	P	F
225	Argentan to Liege	US 9th Infantry Division	27-Aug-44	40.0	1.0	1.0	0.8	0.9	R	P-N	F
226	Argentan to Liege	US 9th Infantry Division	28-Aug-44	35.0	1.0	1.0	0.8	0.9	NR	P-N	F
227	Argentan to Liege	US 9th Infantry Division	29-Aug-44	40.0	1.0	1.0	0.8	0.9	NR	P-N	F
228	Argentan to Liege	US 9th Infantry Division	30-Aug-44	35.0	1.0	1.0	0.8	0.9	NR	P-N	F
229	Argentan to Liege	US 9th Infantry Division	31-Aug-44	48.0	0.8	1.0	0.8	0.9	NR	N	F
230	Argentan to Liege	US 9th Infantry Division	01-Sep-44	25.0	1.0	1.0	0.8	0.9	NR	S	F

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DATE	DISTANCE (KM)	WEATHER ARMOR	WEATHER AIR	TERRAIN	ROADNET	OBSTACLES	OPP'N	ATK INT'Y COND'N
231	Argentan to Liege	US 9th Infantry Division	02-Sep-44	24.0	1.0	1.0	0.8	0.9	NR	S	F
232	Argentan to Liege	US 9th Infantry Division	03-Sep-44	32.0	1.0	1.0	0.8	0.9	NR	N	F
233	Argentan to Liege	US 9th Infantry Division	04-Sep-44	22.0	1.0	1.0	0.8	0.9	NR	M	F
234	Argentan to Liege	US 9th Infantry Division	05-Sep-44	1.0	1.0	1.0	0.8	0.9	R	I	T
235	Argentan to Liege	US 9th Infantry Division	06-Sep-44	2.0	0.9	1.0	0.8	0.9	R	I	T
236	Argentan to Liege	US 9th Infantry Division	07-Sep-44	3.0	0.8	1.0	0.8	0.9	R	M	T
237	Argentan to Liege	US 9th Infantry Division	08-Sep-44	37.0	0.8	1.0	0.8	0.9	NR	S	T
238	Argentan to Liege	US 9th Infantry Division	09-Sep-44	11.0	1.0	1.0	0.8	0.9	R	S	T
239	Argentan to Liege	US 9th Infantry Division	10-Sep-44	9.0	1.0	1.0	0.8	0.9	NR	S	T
240	Le Mans to Metz	US XX Corps	14-Aug-44	24.0	1.0	1.0	0.9	0.9	NR	N	F
241	Le Mans to Metz	US XX Corps	15-Aug-44	30.0	0.9	1.0	0.9	0.9	NR	S	F
242	Le Mans to Metz	US XX Corps	16-Aug-44	31.0	1.0	1.0	0.9	0.9	U	N-M	F
243	Le Mans to Metz	US XX Corps	17-Aug-44	6.0	1.0	1.0	0.9	0.9	U	N-M	F
244	Le Mans to Metz	US XX Corps	18-Aug-44	11.0	1.0	1.0	0.9	0.9	U	N-M	F
245	Le Mans to Metz	US XX Corps	19-Aug-44	P	0.9	1.0	NR	0.9	NR	P	P
246	Le Mans to Metz	US XX Corps	20-Aug-44	P	0.8	1.0	NR	0.9	NR	P	P
247	Le Mans to Metz	US XX Corps	21-Aug-44	55.0	0.9	1.0	0.9	0.9	NR	N	F
248	Le Mans to Metz	US XX Corps	22-Aug-44	40.0	0.9	1.0	0.8	0.9	NR	S	F
249	Le Mans to Metz	US XX Corps	23-Aug-44	5.0	0.8	1.0	0.8	0.9	R	S	F
250	Le Mans to Metz	US XX Corps	24-Aug-44	8.0	1.0	1.0	0.8	0.9	R	S	T
251	Le Mans to Metz	US XX Corps	25-Aug-44	25.0	1.0	1.0	0.8	0.9	NR	N	T
252	Le Mans to Metz	US XX Corps	26-Aug-44	20.0	1.0	1.0	0.8	0.9	NR	N	T
253	Le Mans to Metz	US XX Corps	27-Aug-44	25.0	1.0	1.0	0.8	0.9	NR	S	T
254	Le Mans to Metz	US XX Corps	28-Aug-44	40.0	0.8	1.0	0.8	0.9	NR	N	T
255	Le Mans to Metz	US XX Corps	29-Aug-44	30.0	1.0	1.0	0.8	0.9	NR	S	T
256	Le Mans to Metz	US XX Corps	30-Aug-44	35.0	0.9	1.0	0.8	0.9	NR	N	T
257	Le Mans to Metz	US XX Corps	31-Aug-44	55.0	0.8	1.0	0.7	0.9	R	N	T
258	Le Mans to Metz	US XX Corps	01-Sep-44	10.0	1.0	1.0	NR	0.9	NR	P-N	P
259	Le Mans to Metz	US XX Corps	02-Sep-44	10.0	0.8	1.0	NR	0.9	NR	P-N	P
260	Le Mans to Metz	US XX Corps	03-Sep-44	10.0	1.0	1.0	NR	0.9	NR	P-N	P
261	Le Mans to Metz	US XX Corps	04-Sep-44	10.0	0.9	1.0	NR	0.9	NR	P-N	P
262	Le Mans to Metz	US XX Corps	05-Sep-44	P	0.8	1.0	NR	0.9	NR	P	P
263	Le Mans to Metz	US XX Corps	06-Sep-44	14.0	0.7	1.0	0.7	0.9	NR	N	F
264	Le Mans to Metz	US XX Corps	07-Sep-44	7.0	0.7	1.0	0.7	0.9	FZ	N	F
265	Le Mans to Metz	US XX Corps	08-Sep-44	2.0	0.7	1.0	0.7	0.9	FZ	I	F
266	Le Mans to Metz	US XX Corps	09-Sep-44	2.0	0.8	1.0	0.7	0.9	R-FZ	I	T
267	Le Mans to Metz	US XX Corps	10-Sep-44	3.0	0.9	1.0	0.7	0.9	R-FZ	I	T
268	Le Mans to Metz	US XX Corps	11-Sep-44	4.0	0.9	1.0	0.7	0.9	R-FZ	I	T
269	Le Mans to Metz	US XX Corps	12-Sep-44	2.0	1.0	1.0	0.7	0.9	R-FZ	P-I	T
270	Le Mans to Metz	US XX Corps	13-Sep-44	0.0	0.9	1.0	0.7	0.9	R-FZ	I	T
271	Le Mans to Metz	US 7th Armored Division	14-Aug-44	24.0	1.0	1.0	0.9	0.9	NR	N	F
272	Le Mans to Metz	US 7th Armored Division	15-Aug-44	38.0	0.9	1.0	0.9	0.9	NR	N-I	F
273	Le Mans to Metz	US 7th Armored Division	16-Aug-44	11.0	1.0	1.0	0.9	0.9	U	S-I	F
274	Le Mans to Metz	US 7th Armored Division	17-Aug-44	21.0	1.0	1.0	0.9	0.9	U	N-I	F
275	Le Mans to Metz	US 7th Armored Division	18-Aug-44	20.0	1.0	1.0	0.9	0.9	NR	N	F
276	Le Mans to Metz	US 7th Armored Division	19-Aug-44	P	0.9	1.0	NR	0.9	NR	P	P

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DATE	DISTANCE (KM)	WEATHER ARMOR	WEATHER AIR	TERRAIN	ROADNET	OBSTACLES	OPP/N	ATK INT'Y COND/N
277	Le Mans to Metz	US 7th Armored Division	20-Aug-44	P	0.8	1.0	NR	0.9	NR	P	P
278	Le Mans to Metz	US 7th Armored Division	21-Aug-44	55.0	0.9	1.0	0.9	0.9	NR	N	F
279	Le Mans to Metz	US 7th Armored Division	22-Aug-44	34.0	0.9	1.0	0.8	0.9	NR	S-I	F
280	Le Mans to Metz	US 7th Armored Division	23-Aug-44	12.0	0.8	1.0	1.0	0.8	R	S-I	F
281	Le Mans to Metz	US 7th Armored Division	24-Aug-44	10.0	1.0	1.0	0.8	0.9	R	S-I	T
282	Le Mans to Metz	US 7th Armored Division	25-Aug-44	45.0	1.0	1.0	0.8	0.9	NR	N	T
283	Le Mans to Metz	US 7th Armored Division	26-Aug-44	P	1.0	1.0	0.8	0.9	NR	P	T
284	Le Mans to Metz	US 7th Armored Division	27-Aug-44	55.0	1.0	1.0	0.8	0.9	NR	S	T
285	Le Mans to Metz	US 7th Armored Division	28-Aug-44	40.0	0.8	1.0	0.8	0.9	NR	N	T
286	Le Mans to Metz	US 7th Armored Division	29-Aug-44	35.0	1.0	1.0	0.8	0.9	NR	S	T
287	Le Mans to Metz	US 7th Armored Division	30-Aug-44	55.0	0.9	1.0	0.8	0.9	NR	N-S	T
288	Le Mans to Metz	US 7th Armored Division	31-Aug-44	60.0	0.8	1.0	0.7	0.9	R	N-S	T
289	Le Mans to Metz	US 7th Armored Division	01-Sep-44	P	1.0	1.0	NR	0.9	NR	P	P
290	Le Mans to Metz	US 7th Armored Division	02-Sep-44	P	0.8	1.0	NR	0.9	NR	P	P
291	Le Mans to Metz	US 7th Armored Division	03-Sep-44	P	1.0	1.0	NR	0.9	NR	P	P
292	Le Mans to Metz	US 7th Armored Division	04-Sep-44	P	0.9	1.0	NR	0.9	NR	P	P
293	Le Mans to Metz	US 7th Armored Division	05-Sep-44	P	0.8	1.0	NR	0.9	NR	P	P
294	Le Mans to Metz	US 7th Armored Division	06-Sep-44	46.0	0.7	1.0	0.7	0.9	NR	S-I	F
295	Le Mans to Metz	US 7th Armored Division	07-Sep-44	12.0	0.7	1.0	0.7	0.9	FZ	I	F
296	Le Mans to Metz	US 7th Armored Division	08-Sep-44	2.0	0.7	1.0	0.7	0.9	FZ	I	F
297	Le Mans to Metz	US 7th Armored Division	09-Sep-44	2.0	0.8	1.0	0.7	0.9	R-FZ	I	T
298	Le Mans to Metz	US 7th Armored Division	10-Sep-44	0.0	0.9	1.0	0.7	0.9	R-FZ	I	T
299	Le Mans to Metz	US 7th Armored Division	11-Sep-44	0.0	0.9	1.0	0.7	0.9	R-FZ	S	T
300	Le Mans to Metz	US 7th Armored Division	12-Sep-44	2.0	1.0	1.0	0.7	0.9	R-FZ	S	T
301	Le Mans to Metz	US 7th Armored Division	13-Sep-44	0.0	0.9	1.0	0.7	0.9	R-FZ	S	T
302	Saar (Lorraine) Campaign	US XII Corps	08-Nov-44	2.8	0.3	0.9	0.8	0.8	NR	I	F
303	Saar (Lorraine) Campaign	US XII Corps	09-Nov-44	2.2	0.3	0.9	0.8	0.8	NR	I	F
304	Saar (Lorraine) Campaign	US XII Corps	10-Nov-44	3.5	0.3	0.9	0.8	0.8	NR	M	T
305	Saar (Lorraine) Campaign	US XII Corps	11-Nov-44	3.5	0.3	0.9	0.8	0.8	NR	M	T
306	Saar (Lorraine) Campaign	US XII Corps	12-Nov-44	2.0	0.3	0.9	0.8	0.8	NR	M	T
307	Saar (Lorraine) Campaign	US XII Corps	13-Nov-44	1.3	0.3	0.9	0.8	0.8	NR	I	T
308	Saar (Lorraine) Campaign	US XII Corps	14-Nov-44	1.5	0.3	0.9	0.8	0.8	NR	I	T
309	Saar (Lorraine) Campaign	US XII Corps	15-Nov-44	0.8	0.3	0.9	0.8	0.8	NR	I	T
310	Saar (Lorraine) Campaign	US XII Corps	16-Nov-44	3.2	0.3	0.9	0.8	0.8	NR	M	T
311	Saar (Lorraine) Campaign	US XII Corps	17-Nov-44	P	0.5	0.9	0.8	0.8	NR	P	NR
312	Saar (Lorraine) Campaign	US XII Corps	18-Nov-44	1.1	0.7	0.9	0.8	0.8	NR	I	F
313	Saar (Lorraine) Campaign	US XII Corps	19-Nov-44	1.3	1.0	0.9	0.8	0.8	NR	I	T
314	Saar (Lorraine) Campaign	US XII Corps	20-Nov-44	5.0	0.3	0.9	0.8	0.8	NR	S	T
315	Saar (Lorraine) Campaign	US XII Corps	21-Nov-44	2.4	0.5	0.9	0.8	0.8	NR	M	T
316	Saar (Lorraine) Campaign	US XII Corps	22-Nov-44	2.8	0.5	0.9	0.8	0.8	NR	M	T
317	Saar (Lorraine) Campaign	US XII Corps	23-Nov-44	2.8	0.7	0.9	0.8	0.8	NR	I	T
318	Saar (Lorraine) Campaign	US XII Corps	24-Nov-44	2.0	1.0	0.9	0.8	0.8	NR	I	T
319	Saar (Lorraine) Campaign	US XII Corps	25-Nov-44	2.6	1.0	0.9	0.8	0.8	NR	M	T
320	Saar (Lorraine) Campaign	US XII Corps	26-Nov-44	1.3	0.7	0.9	0.8	0.8	NR	M	T
321	Saar (Lorraine) Campaign	US XII Corps	27-Nov-44	2.3	0.5	0.9	0.8	0.8	NR	M	T
322	Saar (Lorraine) Campaign	US XII Corps	28-Nov-44	0.5	0.5	0.9	0.8	0.8	NR	P-I	T

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DATE	DISTANCE (KM)	WEATHER ARMOR	TERRAIN AIR	ROADNET OBSTACLES	OPP/N	ATK INT'Y COND/N
323	Saar (Lorraine) Campaign	US XII Corps	29-Nov-44	0.5	0.3	0.9	0.8	NR	P-I T
324	Saar (Lorraine) Campaign	US XII Corps	30-Nov-44	0.1	0.5	0.9	0.8	NR	P-S T
325	Saar (Lorraine) Campaign	US XII Corps	01-Dec-44	0.4	0.7	0.9	0.8	NR	I T
326	Saar (Lorraine) Campaign	US XII Corps	02-Dec-44	0.4	1.0	0.9	0.8	NR	I T
327	Saar (Lorraine) Campaign	US XII Corps	03-Dec-44	0.1	0.3	0.9	0.8	NR	P-I T
328	Saar (Lorraine) Campaign	US XII Corps	04-Dec-44	1.1	0.5	0.9	0.8	NR	I F
329	Saar (Lorraine) Campaign	US XII Corps	05-Dec-44	4.5	0.7	0.9	0.8	NR	S T
330	Saar (Lorraine) Campaign	US XII Corps	06-Dec-44	2.4	0.3	0.9	0.8	NR	M T
331	Saar (Lorraine) Campaign	US XII Corps	07-Dec-44	1.4	0.5	0.9	0.8	NR	I T
332	Saar (Lorraine) Campaign	US 4th Armored Division	09-Nov-44	8.00	0.3	0.9	0.8	NR	S F
333	Saar (Lorraine) Campaign	US 4th Armored Division	10-Nov-44	3.00	0.3	0.9	0.8	NR	I-S F
334	Saar (Lorraine) Campaign	US 4th Armored Division	11-Nov-44	4.60	0.3	0.9	0.8	NR	I-S F
335	Saar (Lorraine) Campaign	US 4th Armored Division	12-Nov-44	1.00	0.3	0.9	0.8	NR	I F
336	Saar (Lorraine) Campaign	US 4th Armored Division	13-Nov-44	3.00	0.3	0.9	0.8	NR	S-P F
337	Saar (Lorraine) Campaign	US 4th Armored Division	14-Nov-44	2.40	0.3	0.9	0.8	NR	I T
338	Saar (Lorraine) Campaign	US 4th Armored Division	15-Nov-44	0.90	0.3	0.9	0.8	NR	I T
339	Saar (Lorraine) Campaign	US 4th Armored Division	16-Nov-44	P	0.3	0.9	0.8	NR	P P
340	Saar (Lorraine) Campaign	US 4th Armored Division	17-Nov-44	P	0.5	0.9	0.8	NR	P P
341	Saar (Lorraine) Campaign	US 4th Armored Division	18-Nov-44	P	0.7	0.9	0.8	NR	P P
342	Saar (Lorraine) Campaign	US 4th Armored Division	19-Nov-44	5.70	1.0	0.9	0.8	NR	S-P F
343	Saar (Lorraine) Campaign	US 4th Armored Division	20-Nov-44	2.8	0.3	0.9	0.8	NR	S F
344	Saar (Lorraine) Campaign	US 4th Armored Division	21-Nov-44	6.0	0.5	0.9	0.8	NR	N F
345	Saar (Lorraine) Campaign	US 4th Armored Division	22-Nov-44	5.4	0.5	0.9	0.8	NR	S-P F
346	Saar (Lorraine) Campaign	US 4th Armored Division	23-Nov-44	5.6	0.7	0.9	0.8	NR	S-P F
347	Saar (Lorraine) Campaign	US 4th Armored Division	24-Nov-44	4.9	1.0	0.9	0.8	NR	I-S T
348	Saar (Lorraine) Campaign	US 4th Armored Division	25-Nov-44	0.6	1.0	0.9	0.8	NR	I-P T
349	Saar (Lorraine) Campaign	US 4th Armored Division	26-Nov-44	5.0	0.7	0.9	0.8	NR	I-S T
350	Saar (Lorraine) Campaign	US 4th Armored Division	27-Nov-44	1.0	0.5	0.9	0.8	NR	I T
351	Saar (Lorraine) Campaign	US 4th Armored Division	28-Nov-44	2.2	0.5	0.9	0.8	NR	I T
352	Saar (Lorraine) Campaign	US 4th Armored Division	29-Nov-44	0.8	0.3	0.9	0.8	NR	S-P W
353	Saar (Lorraine) Campaign	US 4th Armored Division	30-Nov-44	1.0	0.5	0.9	0.8	NR	I W
354	Saar (Lorraine) Campaign	US 4th Armored Division	01-Dec-44	1.0	0.7	0.9	0.8	NR	I W
355	Saar (Lorraine) Campaign	US 4th Armored Division	02-Dec-44	1.6	1.0	0.9	0.8	NR	I W
356	Saar (Lorraine) Campaign	US 4th Armored Division	03-Dec-44	P	0.3	0.9	0.8	NR	P P
357	Saar (Lorraine) Campaign	US 4th Armored Division	04-Dec-44	1.5	0.5	0.9	0.8	NR	S T
358	Saar (Lorraine) Campaign	US 4th Armored Division	05-Dec-44	9.8	0.7	0.9	0.8	NR	S-N T
359	Saar (Lorraine) Campaign	US 4th Armored Division	06-Dec-44	0.3	0.3	0.9	0.8	NR	I T
360	Saar (Lorraine) Campaign	US 4th Armored Division	07-Dec-44	2.4	0.5	0.9	0.8	NR	I-S W

NO.	ATK MISS'N	ATK CASX	DEF COND'N	DEF MISS'N	DEF CASX	COMMENTS
1	1	NR	F	WD	U	
2	1	0.10	F	WD	U	
3	1	0.50	F	WD	U	
4	1	2.00	F	PD	U	
5	1	1.40	F	PD	U	
6	1	0.50	F	DL	U	
7	1	0.10	T	FD-WD	U	
8	3	0.70	T	DL	U	
9	2	0.80	T	WD	U	
10	P	0.40	P	P	U	
11	2	1.30	T	WD	U	
12	2	2.60	T	DL	U	
13	2	0.70	T	DL	U	
14	2	0.30	T	DL	U	
15	2	0.50	T	DL	U	
16	2	0.03	U	WD	U	
17	2	0.04	U	WD	U	
18	2	0.03	U	HD	U	
19	2	0.04	U	HD	U	
20	2	0.03	U	HD	U	
21	2	0.21	U	HD	U	
22	2	0.16	U	HD	U	
23	2	0.01	U	HD-DL	U	
24	2	0.05	U	HD-WD	U	
25	2	0.06	U	HD-WD	U	
26	2	0.12	U	WD	U	
27	3	0.30	U	WD	U	
28	3	0.59	U	HD-WD	U	
29	3	0.51	U	HD	U	
30	3	0.17	U	HD	U	
31	3	0.15	U	WD	U	
32	3	0.07	U	WD	U	
33	3	0.03	U	DL	U	
34	2	0.10	U	WD	U	
35	2	0.20	U	WD	U	
36	2	0.50	U	HD	U	
37	2	0.50	U	HD	U	
38	2	0.50	U	HD	U	
39	2	0.30	U	HD	U	
40	2	0.30	U	DL-HD	U	
41	2	0.50	U	DL-HD	U	
42	2	0.10	U	HD	U	
43	2	0.20	U	HD	U	
44	2	0.20	U	HD	U	
45	3	0.40	U	DL	U	
46	3	0.80	U	DL	U	

ORAL FORK

NO.	ATK MISS'N CASX	DE CONJ'N MISS'N CASX	DEF MISS'N CASX	DEF MISS'N CASX	COMMENTS
47	3 1.20	U	HD	U	
48	3 1.40	U	HD	U	
49	3 0.50	U	DL	U	
50	3 0.40	U	LD	U	
51	3 0.20	U	LD	U	
52	3 0.10	U	DL	U	
53	P NR	U	LD	U	
54	2 0.20	U	LD	U	
55	2 0.40	U	HD	U	
56	2 0.30	U	HD	U	
57	2 0.30	U	HD	U	
58	2 0.30	U	HD	U	
59	NR 0.10	U	A-HD	U	
60	NR 0.10	U	HD	U	
61	2 0.30	U	HD	U	
62	2 0.30	U	DL	U	
63	2 0.30	U	DL	U	
64	2 0.30	U	DL	U	
65	2 0.30	U	DL	U	
66	2 0.30	U	DL	U	
67	1 0.20	U	LD	U	
68	1 0.20	U	LD	U	
69	1 0.20	U	LD	U	
70	1 0.20	U	P	U	
71	1 0.20	U	LD	U	
72	1 0.20	U	DL	U	
73	1 0.20	U	LD	U	
74	1 0.20	U	LD	U	
75	1 0.20	U	DL	U	
76	1 0.30	U	HD	U	
77	1 0.20	U	LD	U	
78	1 0.10	U	LD	U	
79	1 0.20	U	DL	U	
80	1 0.10	U	DL	U	
81	1 0.10	U	DL	U	
82	1 0.20	U	DL	U	
83	2 0.10	U	DL	U	
84	2 0.10	U	HD	U	
85	2 0.10	U	HD	U	
86	2 0.30	U	HD	U	
87	2 0.30	U	HD	U	
88	2 0.30	U	HD	U	
89	2 0.30	U	HD-DL	U	
90	2 0.40	U	NR	U	
91	2 0.40	U	HD	U	
92	2 0.40	U	HD	U	

ORALFORE

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NO.	ATK MISS'N CAS%	DEF COND'N CAS%	DEF MISS'N CAS%	DEF CAS%	COMMENTS
93	2 0.40	U	A-HD	U	
94	P 0.10	U	HD	U	
95	P 0.10	U	HD	U	
96	2 0.40	U	A-HD	U	
97	2 0.40	U	DL	U	
98	2 0.40	U	DL	U	
99	2 0.40	U	DL	U	
100	2 0.40	U	HD	U	
101	1 0.10	U	WD	U	
102	1 NR	U	WD	U	
103	1 0.10	U	WD	U	
104	NR	U	WD	U	
105	1 0.10	U	WD	U	
106	1 0.10	U	WD	U	
107	NR	U	WD	U	
108	1 NR	U	WD	U	
109	1 0.10	U	DL	U	
110	1 0.30	U	HD	U	
111	1 0.20	U	WD	U	
112	1 0.10	U	WD	U	
113	1 0.30	U	DL-HD	U	
114	NR	U	HD	U	
115	1 0.10	U	WD	U	
116	1 0.20	U	DL	U	
117	NR	U	DL	U	
118	NR	U	DL	U	
119	NR	U	P	U	
120	2 0.10	U	WD	U	
121	NR	U	P	U	
122	NR	U	P	U	
123	2 0.30	U	WD	U	
124	2.5 0.30	E	WD	U	
125	2.5 0.20	E	DL	U	
126	2.5 0.30	E	DL	U	
127	2.5 0.20	E	DL	U	
128	2.5 0.30	E	DL	U	
129	NR	P	NR	U	
130	NR	P	NR	U	
131	NR	P	NR	U	
132	2 NR	P	NR	U	
133	2 NR	P	NR	U	
134	2 NR	P	NR	U	
135	2 NR	P	NR	U	
136	2 0.10	P	NR	U	
137	1 0.10	T	WD	U	
138	1 0.10	T	WD	U	

ORALFORE

NO.	ATK MISS'N CASX	ATK CASX	DEF COND'N	DEF MISS'N CASX	DEF	COMMENTS
139	1	0.10	T	WD	U	
140	1	0.10	T	WD	U	
141	1	0.10	W	DL	U	
142	1	0.10	W	WD	U	
143	1	0.10	W	DL	U	
144	1	0.10	W	WD	U	
145	1	0.10	W	WD	U	
146	1	0.10	E	WD	U	
147	1	NR	E	DL	U	
148	1	0.10	E	DL	U	
149	1	0.10	E	DL	U	
150	2	0.10	E	DL	U	
151	2	0.10	E	DL	U	
152	2	0.10	W	DL	U	
153	2	0.10	W	DL	U	
154	2	0.10	W	DL	U	
155	2.5	0.20	E	WD	U	
156	2.5	0.40	E	DL	U	
157	2.5	0.90	E	DL	U	
158	2.5	0.90	E	DL	U	
159	2.5	0.70	E	DL	U	
160	NR	NR	P	NR	U	
161	NR	NR	P	NR	U	
162	NR	NR	P	NR	U	
163	NR	NR	P	NR	U	
164	NR	NR	P	NR	U	
165	NR	NR	P	NR	U	
166	NR	NR	P	NR	U	
167	NR	0.20	P	NR	U	
168	1	0.10	T	WD	U	
169	1	0.20	T	WD	U	
170	1	0.20	T	WD	U	
171	1	0.10	T	WD	U	
172	1	0.10	W	DL	U	
173	1	0.20	W	WD	U	
174	1	0.10	W	DL	U	
175	1	0.20	W	WD	U	
176	NR	NR	W	P	U	
177	1	0.10	W	DL	U	
178	1	0.20	E	WD	U	
179	1	0.10	E	WD	U	
180	1	0.10	E	WD	U	
181	NR	NR	E	P	U	
182	2	0.40	E	DL	U	
183	2	0.40	W	DL	U	
184	2	0.30	W	DL	U	

NO.	ATK MISS'N	ATK CASX	DEF COND'N	DEF MISS'N	DEF CASX	COMMENTS
185	2	0.20	W	DL	U	
186	2.5	NR	E	DL	U	
187	2.5	0.20	E	DL	U	
188	2.5	0.30	E	WD	U	
189	2.5	0.10	E	NR	U	
190	P	NR	NR	NR	U	
191	P	NR	NR	NR	U	
192	P	NR	NR	NR	U	
193	P	NR	NR	NR	U	
194	P	NR	NR	NR	U	
195	P	NR	NR	NR	U	
196	P	NR	NR	NR	U	
197	2	NR	NR	NR	U	
198	2	NR	NR	NR	U	
199	P	0.10	NR	NR	U	
200	3	0.10	NR	NR	U	
201	3	NR	NR	NR	U	
202	3	0.10	NR	NR	U	
203	3	0.10	NR	NR	U	
204	3	0.10	NR	NR	U	
205	3	0.10	NR	NR	U	
206	3	0.10	W	WD	U	
207	3	0.10	W	A-DL	U	
208	3	0.20	W	A-DL	U	
209	P	0.50	NR	A	U	
210	3	0.30	E	WD	U	
211	3	0.20	E	WD	U	
212	3	0.10	E	WD	U	
213	2.5	0.10	E	DL	U	
214	2.5	0.30	E	DL	U	
215	2.5	0.90	E	WD	U	
216	NR	0.10	P	NR	U	
217	NR	NR	P	NR	U	
218	NR	NR	P	NR	U	
219	NR	NR	P	NR	U	
220	NR	NR	P	NR	U	
221	NR	NR	P	NR	U	
222	NR	NR	P	NR	U	
223	NR	0.10	P	NR	U	
224	NR	0.10	P	NR	U	
225	NR	0.20	P	NR	U	
226	NR	0.10	P	NR	U	
227	NR	0.20	P	NR	U	
228	NR	0.10	P	NR	U	
229	3	NR	W	WD	U	
230	3	0.10	W	WD	U	

NO.	ATK MISS'N CASX	ATK COND'N	DEF MISS'N	DEF CASX	COMMENTS
231	3	0.10	W	NR	U
232	1	NR	W	NR	U
233	1	0.50	W	NR	U
234	1	0.70	W	DL	U
235	1	0.50	W	DL	U
236	1	0.40	E	WD	U
237	1	0.20	E	WD	U
238	2	0.10	W	WD	U
239	2	0.20	W	DL	U
240	3	0.00	W	WD	6.40
241	3	0.10	W	HD	5.50
242	3	0.50	W	HD	7.00
243	3	0.50	W	HD	2.50
244	3	0.40	W	HD	4.20
245	NR	0.30	P	P	2.50
246	NR	0.10	P	P	1.10
247	1	0.10	T	DL	2.10
248	1	0.20	T	DL-PD	1.50
249	1	0.10	T	PD	1.60
250	1	0.10	W	PD	2.00
251	1	0.10	W	WD	2.40
252	1	0.10	W	WD	2.90
253	1	0.10	W	WD	2.90
254	1	0.10	E	WD	2.70
255	1	0.10	E	WD	3.90
256	1	0.20	E	WD	2.40
257	1	0.10	E	WD	8.60
258	NR	0.10	P	P-WD	2.20
259	NR	0.10	P	P-WD	1.10
260	NR	0.10	P	P-WD	1.10
261	NR	0.10	P	P-WD	0.60
262	NR	0.10	P	P	0.30
263	1	0.10	F	DL	0.20
264	1	0.30	F	DL	0.10
265	1	0.30	F	DL	0.10
266	1	0.50	T	DL	2.40
267	1	0.80	T	DL	0.60
268	1	0.60	T	DL	0.60
269	1	0.60	T	P-DL	0.30
270	1	0.60	T	FD	0.50
271	2	0.00	W	WD	6.40
272	2	0.10	W	HD	5.50
273	2	0.90	W	HD	7.00
274	2	1.00	W	HD	2.50
275	2	0.90	W	WD	4.20
276	NR	0.70	P	P	2.50

NO.	ATK MISS'N	ATK CAS%	DEF COND'N	DEF MISS'N	DEF CAS%	COMMENTS
277	NR	NR	P	P	1.10	
278	1	NR	T	DL	2.10	
279	1	0.20	T	DL-PD	1.50	
280	1	0.10	T	PD	1.60	
281	1	0.20	W	PD	2.00	
282	1	0.20	W	WD	2.40	
283	1	0.10	P	WD	2.90	
284	1	0.60	W	WD	2.90	
285	1	0.40	W	WD	2.70	
286	1	0.30	W	WD	3.90	
287	1	0.30	E	WD	2.40	
288	1	0.30	E	WD	8.60	
289	NR	NR	P	P	NR	
290	NR	NR	P	P	NR	
291	NR	NR	P	P	NR	
292	NR	NR	P	P	NR	
293	NR	NR	P	P	NR	
294	2	0.20	F	DL	1.10	
295	2	0.50	F	DL	0.40	
296	2	0.20	F	FD	0.30	
297	2	1.00	T	FD	0.90	
298	2	1.00	T	FD	0.60	
299	2	0.40	T	FD	0.60	
300	2	0.60	T	FD	0.30	
301	2	0.10	T	FD	0.50	
302	3	0.80	F	FD	5.10	
303	3	1.10	F	FD	3.20	
304	3	0.80	T	DL	2.60	
305	3	1.00	T	DL	3.00	
306	3	0.60	T	DL	5.20	
307	3	1.30	W	DL	2.80	
308	3	0.80	W	DL	2.90	
309	3	0.80	W	DL	3.40	
310	3	0.50	W	DL	3.50	
311	3	0.40	NR	P	1.30	
312	3	0.30	T	DL	5.80	
313	3	1.10	T	DL	4.20	
314	3	0.30	T	DL	3.60	
315	3	0.30	W	DL	3.00	
316	3	0.50	W	DL	1.90	
317	3	0.30	W	DL	1.20	
318	3	0.30	W	PD	1.30	
319	3	0.50	W	DL	1.40	
320	3	0.80	W	DL	1.40	
321	3	0.50	W	DL	1.80	
322	3	0.30	W	DL	1.20	

ORAL FORE

NO.	ATK MISS'N CAS%	DEF COND'N MISS'N CAS%	DEF MISS'N CAS%	COMMENTS
323	3 0.50	W	DL 1.40	
324	3 0.20	W	DL 0.90	
325	3 0.10	W	PD 1.70	
326	3 0.10	W	PD 1.50	
327	3 0.30	W	PD 1.60	
328	3 0.40	W	PD 2.50	
329	3 0.40	W	DL 2.40	
330	3 0.20	W	PD 1.90	
331	3 0.20	W	PD 1.40	
332	3 0.00	F	FD 2.60	
333	3 0.30	F	FD 3.00	
334	3 0.90	T	DL 3.20	
335	3 0.70	T	DL 4.60	
336	3 0.60	T	DL 2.40	
337	3 2.20	W	DL-PD 2.10	
338	3 1.20	W	DL-PD 2.40	
339	3 0.20	W	NR	
340	3 0.10	W	NR	
341	3 0.10	P	NR	
342	3 NR	T	DL 1.00	
343	3 0.10	T	DL 1.10	
344	3 0.30	T	DL 0.80	
345	3 0.20	W	DL 0.70	
346	3 0.60	W	DL 0.60	
347	3 0.30	W	HD-A 1.40	
348	3 0.50	W	HD-A 2.00	
349	3 0.20	W	PD 4.60	
350	3 0.40	W	DL 4.20	
351	3 0.20	W	DL 3.50	
352	3 0.40	W	DL 2.40	
353	3 0.40	W	DL 0.50	
354	3 0.20	W	PD 2.10	
355	3 1.40	W	PD 1.70	
356	3 0.10	W	P NR	
357	3 0.50	W	DL 1.80	
358	3 0.10	W	DL 2.30	
359	3 1.10	W	PD 2.30	
360	3 0.40	W	PD 2.30	

OVERHOLT

1. Data Source:

- a. Title: Statistical Analysis of Korean War Data—Spring 1951
- b. Author: Overholt, J. L.
- c. Date: April 1970
- d. Organization: Center for Naval Analyses
- e. Number: Naval Warfare Analysis Group Study 64, Volume IX of the series of CNA reports on the "Study of Land/Air Tradeoffs (SLAT)"
- f. Available From: DTIC AD-869 481

2. Data Description:

a. (p ix, Summary) "This volume [of the SLAT study series], concerned with the Korean War, describes attempts to relate the strengths of opposing U.N. North Korean/Chinese Communist forces, including fire support, with the ground gained and casualties on both sides. The objective is to determine, by statistical techniques, relationships among various kinds of battle data recorded each day by divisions. These were intended to provide guidance in the TWSP simulation ... "

b. (p ix, Summary) "The data for May 1951 is used because it is readily available and includes various kinds of combat in a period when sectors were relatively quiet, the thrust of the Chinese Communist Army near the Soyang River, and the counterattack of U.N. forces. In this period, there were no large break-throughs or amphibious landings."

c. (p ix, Summary) "The data consists of daily friendly and enemy strengths and casualties in the IX and X Corps in central Korea, air and artillery support of US and ROK divisions, and changes in territory. The enemy had no artillery or air support in this sector during this period. The data on small arms, machine guns, mortars, tanks, etc., though not available for either side in division records, is assumed to be proportional to the strengths and to such ordnance expended in World War II. Reserves were introduced continually by U.N. force, intermittently in the form of new divisions by the Communists."

d. Official after-action reports and operational summaries were used as the principal data sources.

e. Distance is defined as (p 7) "The ground gained (in area) was measured by planimeter from the change that occurred from one day to the next for each division. We obtained the average gain or loss by dividing the area by the front length." However, the source's Annex D-1 describes the "Variables Used in the Regression Analysis" as "the territory measured in square kilometers acquired or relinquished by a friendly unit during the time period under consideration," and expresses the value used in the regressions as this value divided by 10.

f. The time interval is defined as daily intervals (presumably starting around midnight).

g. (p 11) Fire support refers to the artillery and air ordnance delivered in support of each division. Light artillery is expressed in numbers of rounds of ammunition 105mm and larger. Artillery support to divisions, in tons per mile of front.

h. (pp 11-13) Data were collected on three types of air support: *close air support*, *sorties by light bombers*, and *sorties by heavy bombers*. Close air support consists of ordnance sorties delivered under ground or air control to targets beyond the forward bomb line. The ordnance delivered by light bombers within 15 miles of the battle line in support of each division was taken as fire in support of ground troops. Data were also obtained on ordnance delivered in support of corps and army. Heavy bomber support consists of B-29 sorties supporting the divisions, corps, and army.

i. (p 21) "The battles are described by [the] variables already mentioned—the strengths, casualties, and firepower of the opposing sides—and such others as weather, terrain, tempo of fighting, the effects of pre-bombardment and of movement of adjacent units, and the decisions of the opposing commanders to attack, withdraw, or hold."

3. Discussion and Comments:

a. This is a major and apparently one of the earliest efforts to obtain enough detailed data on real combat operations to compare them to the results of wargames. The importance of such efforts is clear.

b. (p i, Abstract) "Though the work is indicative, it is limited by the poor quality of information about enemy strength." (p 7) "Enemy strength was measured from the order of battle, as derived by intelligence sources. Only the elements of the Communist division opposing each friendly division are available." (p 11) "The enemy strength data was poor. The order of battle was derived from captured prisoners; when the enemy was attacking, little or no data was available because no prisoners were taken. Even where such intelligence was available, it was often inaccurate because the enemy troops were sometimes transferred and did not know the designations of their new units when interrogated. Analysis after the war disclosed that the number of enemy troops was frequently underestimated because the Chinese Communists were trained for long night marches, averaging 15 to 20 miles a night for two or three weeks, and were taught to stand stock-still when aircraft were heard or sighted. U.N. forces discounted sightings by South Korean civilians. Finally, known enemy casualties were not subtracted from the order of battle. [In one of the author's attempts to improve the quality of enemy strength information] simple subtraction of casualties from strength figures led to inconsistencies." (p 46) "The enemy strength and casualty data should be examined more critically to see whether estimates are made in the same manner by various forces. Apparently the 2nd Army Division estimated greater casualties than the 1st Marine Division. The casualties may be [i.e., may have been] estimated from the quantity of ordnance fired and may be fallacious."

4. Data Table Notes: This report presents its data only in graphical form. Consequently, specific values are no longer readily recoverable. Unfortunately, it was not feasible in the course of this work to convert it back into digital (tabular or numerical) form. Accordingly, no data table is provided for this data source. However, the source is cited for the sake of completeness.

PARSONS

1. Data Source:

- a. Title: Military Unit Rates of Advance in Attack
- b. Author: Parsons, LTC Norman W.
- c. Date: 14 September 1954
- d. Organization: Combat Operations Research Group
- e. Number: Staff Memorandum SM-29-CORG
- f. Available From: Wainstein, Leonard, "An Examination of the Parsons and Hulse Papers on Rates of Advance," Paper P-991, Institute for Defense Analyses, December 1973, AD-779 848

2. Data Description:

a. (p A-2) "It has seemed apparent that there is a general lack of information regarding the actual rates of advance of military units in an attack against an enemy. This lack of information has been noticed in map problems presented in various service schools and in war games and battle planning activities. It seems that in the majority of cases the rate of advance of an attacking unit is considered to approximate the rate of movement in an administrative march cross country, without consideration for the various types of terrain included in the general term 'cross country.' Casual examination of narrative accounts of military operations indicates that such a rate of advance is unrealistically high. It is believed that more accurate knowledge of factual rates of advance is required in order to permit more realistic map problems and battle plans. [Accordingly, in this paper] the problem is to determine the rates of advance of infantry units in attack under various conditions of terrain and enemy resistance."

b. The source provides data on 33 examples of successful attacks by infantry battalion-sized forces supported by artillery and tanks. Apparently successful attacks are those that reached their intended objective (cf. para d, below). Unsuccessful attacks were not tabulated, although p A-2 remarks that "It should be noted that [in the records consulted] there were many unsuccessful attacks by the same units in the same general terrain and against the same general types of enemy resistance. This analysis does not consider the probability of success of any given attack under the conditions tabulated." Of the 33 examples, 3 are from Guadalcanal, 10 are from Italy, and 20 are from NW Europe (specifically, 14 from the Cherbourg Peninsula/St. Lo region, and 6 from the Moselle River/Huertgen Forest region).

c. The source obtained its information from various Department of the Army History Division reports, and military intelligence reports of the War Department.

d. Distance is defined as (p 4) "The analysis considers only the average rates of advance from the line of departure to the objective when the attack was successful."

e. Terrain is defined as open (lightly wooded, slightly rolling, elevation changes less than 30 meters per mile and not more than 25 percent woods cover); moderately open (wooded and rolling, elevation changes 30 to 50 meters per mile or 25 to 50 percent woods cover); moderately close (wooded and hilly, elevation changes 50 to 100 meters per mile or 50 to 75 percent woods cover); or mountainous (elevation changes over 300 meters per mile)

f. Type action is defined as river crossing, regimental attack, etc., and as "Administrative," "Pursuit," "Exploitation of a Breakthrough," "Seizure of a Deep Objective," or "Attack Through Infantry out of a Bridgehead."

g. Artillery support is defined as number of battalions.

h. Enemy strength and resistance is the number of enemy units (battalions, companies, etc.) if that is known; otherwise it is categorized as light, none, very heavy, etc.

i. Weather is defined as cold, rainy, clear, etc.

j. (p 2) "Other factors which have a bearing on rates of movement, such as morale, fatigue, extent of prior planning and reconnaissance, amount of preparation and briefing, and similar items, although having important effects, cannot be separated for consideration because of the lack of data."

3. Discussion and Comments:

a. This supplements the HULSE data base on armored unit rates of advance by providing information on infantry unit rates of advance. The values here are mainly for forces that were heavily engaged.

b. (p 3) "In studying Table 3 there is some suspicion that the description of the enemy resistance may include some element of description of the difficulties of the terrain." If so, this gives rise to the vicious circle described in our discussion of the BAORG data base. It is also possible that the defender may choose to defend more strongly at places where the terrain is difficult. Either deliberate defender choice or the vicious circle would induce a statistical confounding and correlation of the degree of enemy resistance with the difficulty of the terrain.

4. Data Table Notes: None

PART 1 OF 2

PARSONS

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (HOURS)(DAYS)	TIME (KM/DAY)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS
1	Moselle R Xng/Dieulourd	2nd Bn, 317th Inf, 80th ID	3960	3.62	4.00	0.17	21.73	12-Sep-44	12-Sep-44	Lite
2	Moselle R Xng/Dieulourd	3rd Bn, 317th Inf, 80th ID	2640	2.41	1.50	0.06	38.62	12-Sep-44	12-Sep-44	Lite
3	Moselle R Xng/Arnaville	1st Bn, 10th Inf, 5th ID	2250	2.06	7.00	0.25	8.23	10-Sep-44	10-Sep-44	Heavy
4	Hurtgen Forest/Schmidt	3rd Bn, 112th Inf, 28th ID	6060	5.54	5.00	0.31	17.73	03-Nov-44	03-Nov-44	Lite
5	Hurtgen Forest/Vossenack	1st Bn, 109th Inf, 28th ID	1750	1.60	5.00	0.21	7.68	02-Nov-44	02-Nov-44	Lite
6	Hurtgen Forest/Vossenack	2nd Bn, 112th Inf, 28th ID	3100	2.83	3.50	0.15	19.44	02-Nov-44	02-Nov-44	Medium
7	Mt. Lungo, Italy	1st Bn, 142nd Inf, 35th ID	2400	2.19	16.50	0.69	3.19	16-Dec-45	16-Dec-45	Heavy
8	"	2nd Bn, 142nd Inf, 35th ID	2400	2.19	12.50	0.52	4.21	16-Dec-45	16-Dec-45	Heavy
9	Mt. Samucro, Italy	1st Bn, 143rd Inf, 36th ID	2200	2.01	13.00	0.54	3.71	07-Dec-43	08-Dec-43	Heavy
10	Mt. Camino, Italy	2nd Bn, 142nd Inf, 36th ID	1900	1.74	6.50	0.27	6.41	03-Dec-43	03-Dec-43	Medium
11	"	3rd Bn, 142nd Inf, 36th ID	1150	1.05	4.00	0.17	6.31	03-Dec-43	03-Dec-43	Medium
12	Mt. Camino, Italy	1st Bn, 1st Sp Svc For, V Corps	2100	1.92	15.75	0.66	2.93	02-Dec-43	03-Dec-43	Heavy
13	"	2nd Bn, 1st Sp Svc For, V Corps	3300	3.02	10.33	0.43	7.01	02-Dec-43	03-Dec-43	Heavy
14	Cherbourg Pen	9th Inf Div	9700	8.87	6.50	0.27	32.75	19-Jun-44	19-Jun-44	None
15	Cherbourg Pen/Valognes	1st Bn, 313th Inf, 78th ID	8800	8.05	9.00	0.38	21.46	19-Jun-44	19-Jun-44	Lite
16	Cherbourg Pen/Montebois	1st Bn, 8th Inf, 4th ID	2600	2.38	11.25	0.47	5.07	19-Jun-44	19-Jun-44	Heavy
17	"	"	4300	3.93	6.75	0.28	13.98	19-Jun-44	19-Jun-44	Lite
18	Cherbourg Pen/St Saviour le Vicomte	1st Bn, 47th Inf, 9th ID	18900	17.28	17.00	0.71	24.40	17-Jun-44	17-Jun-44	Lite
19	Cherbourg Pen	3rd Bn, 23rd Inf, 4th ID	1600	1.46	3.50	0.15	10.03	14-Jun-44	14-Jun-44	Lite
20	St. Lo/Hill 192	1st Bn, 38th Inf, 2nd ID	1200	1.10	10.30	0.43	2.56	11-Jul-44	11-Jul-44	Heavy
21	"	2nd Bn, 38th Inf, 2nd ID	1700	1.55	11.00	0.46	3.39	11-Jul-44	11-Jul-44	Heavy
22	"	1st Bn, 23rd Inf, 2nd ID	1500	1.37	11.00	0.46	2.99	11-Jul-44	11-Jul-44	Heavy
23	St. Lo/Hill 147	2nd Bn, 116th Inf, 29th ID	3200	2.93	14.00	0.58	5.02	11-Jul-44	11-Jul-44	Heavy
24	St. Lo/Vire R. Xng	2nd Bn, 117th Inf, 30th ID	1200	1.10	3.50	0.15	7.52	07-Jul-44	07-Jul-44	Lite
25	"	2nd Bn, 117th Inf, 30th ID	1000	0.91	4.00	0.17	5.49	07-Jul-44	07-Jul-44	Lite
26	"	2nd Bn, 117th Inf, 30th ID	600	0.55	4.00	0.17	3.29	07-Jul-44	07-Jul-44	Lite
27	St. Lo/West of Vire R.	3rd Bn, 118th Inf, 30th ID	1400	1.28	12.00	0.50	2.56	15-Jul-44	15-Jul-44	Heavy
28	Volturno River, Italy	2nd Bn, 7th Inf, 3rd ID	3060	2.80	6.00	0.25	11.19	13-Oct-43	13-Oct-43	Medium
29	"	2nd Bn, 168th Inf, 34th ID	5000	4.57	5.50	0.23	19.95	13-Oct-43	13-Oct-43	Lite
30	"	3rd Bn, 168th Inf, 34th ID	3250	2.97	6.33	0.26	11.26	04-Nov-43	04-Nov-43	Lite
31	Guadalcanal	1st Bn, 5th Marines	6000	5.49	5.50	0.23	23.94	08-Aug-42	08-Aug-42	Lite
32	"	164th Inf	10000	9.14	6.00	0.25	36.58	04-Nov-42	04-Nov-42	Lite
33	"	1st Bn, 27th Inf	1900	1.74	2.67	0.11	15.64	22-Jan-45	22-Jan-45	Lite

PARSONS

NO.	OPERATION NAME/PHASE	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
1	Moselle R Xng/Dieulourd	Foot	Hilly	Wooded	Riverine	Bn	Example 1	Dry, mild
2	Moselle R Xng/Dieulourd	Foot	Hilly	Wooded	Riverine	Bn	Example 2	Dry, mild
3	Moselle R Xng/Arnaville	Foot	Rolling	Wooded	Riverine	Bn	Example 3	Dry, clear
4	Hurtgen Forest/Schmidt	Foot	Rugged	Wooded	Wet	Bn	Example 4	Cold, wet
5	Hurtgen Forest/Vossenack	Foot	Rolling	Wooded	Wet	Bn	Example 5	Cold, wet, misty
6	Hurtgen Forest/Vossenack	Foot	Rolling	Open	Wet	Bn	Example 6	Cold, wet, misty
7	Mt. Lungo, Italy	Foot	Mountain	NA	Wet	Bn	Example 7	Cold, wet
8	"	Foot	Mountain	NA	Wet	Bn	Example 8	Cold, wet, AM fog
9	Mt. Samucro, Italy	Foot	Mountain	NA	Wet	Bn	Example 9	Rainy, cold
10	Mt. Camino, Italy	Foot	Mountain	NA	Wet	Bn	Example 10	Rainy, cold
11	"	Foot	Mountain	NA	Wet	Bn	Example 11	Rainy, cold
12	Mt. Camino, Italy	Foot	Mountain	NA	Wet	Bn	Example 12	Rainy, cold
13	"	Foot	Mountain	NA	Wet	Bn	Example 13	Rainy, cold
14	Cherbourg Pen	Foot	Rolling	Wooded	Firm	Div	Example 14	Clear
15	Cherbourg Pen/Valognes	Foot	Rolling	Wooded	Firm	Bn	Example 15	Clear
16	Cherbourg Pen/Montebourg	Foot	Rolling	Wooded	Firm	Bn	Example 16	Clear/1st Objective
17	"	Foot	Rolling	Wooded	Firm	Bn	Example 17	Clear/2nd Objective
18	Cherbourg Pen/St Saver le Vicomte	Foot	Rolling	Wooded	NA	Bn	Example 18	Clear
19	Cherbourg Pen	Foot	Rolling	Wooded	NA	Bn	Example 19	Clear
20	St. Lo/Hill 192	Foot	Hilly	Wooded	NA	Bn	Example 20	Hedgerow
21	"	Foot	Hilly	Wooded	NA	Bn	Example 21	Hedgerow
22	"	Foot	Hilly	Wooded	NA	Bn	Example 22	Hedgerow
23	St. Lo/Hill 147	Foot	Hilly	Wooded	NA	Bn	Example 23	Hedgerow
24	St. Lo/Vire R. Xng	Foot	Riverine	Wooded	Riverine	Bn	Example 24	Hedgerow/showers
25	"	Foot	Riverine	Wooded	Riverine	Bn	Example 25	"
26	"	Foot	Riverine	Wooded	Riverine	Bn	Example 26	"
27	St. Lo/West of Vire R.	Foot	Rolling	Wooded	NA	Bn	Example 27	Hedgerow
28	Volturno River, Italy	Foot	Rolling	Open	Riverine	Bn	Example 28	Nite atk/River Xng
29	"	Foot	Rolling	Open	Riverine	Bn	Example 29	"
30	"	Foot	Rolling	Open	Riverine	Bn	Example 30	"
31	Guadalcanal	Foot	Flat	Wooded	Sand	Bn	Example 31	Clear, hot
32	"	Foot	Flat	Wooded	NA	Rgt	Example 32	Hot, moist
33	"	Foot	NA	Open	NA	Bn	Example 33	Hot

QUICKWIN

1. Data Source:

- a. Title: A Survey of "Quick Wins" in Modern War
- b. Author: HERO
- c. Date: October 1975
- d. Organization: Historical Evaluation and Research Organization
- e. Number: AD-A025 893
- f. Available From: DTIC

2. Data Description:

a. (p 1, Introduction) "In an attempt to identify the factors which seem to have contributed to, or militated against, rapid and decisive victory, the Historical Evaluation and Research Organization (HERO) has studied seven examples of 'quick wins' in modern war, three examples of 'almost quick wins' and three examples that ended in stalemate." Distances and durations are given for 30 occasions described as "major rapid offensives" of the 19th and 20th centuries. The principal means of movement in these offensives are also given.

b. The major rapid offensives studied are Marengo, Ulm, Jena, Friedland, Danube, Russia, Lutzen-Bautzen, Vicksburg, Savannah-Raleigh, Appomattox, Sadowa, Metz-Sedan, Marne, Caparetto, Third Gaza, Megiddo, Flanders, Barbarossa, Malaya, Luzon I, Caucasus, Cobra, Luzon II, Manchuria, N. Korean Offensive, UN Offensive, Sinai Campaign, Samaria, and Golan.

c. (p 2) "Only secondary sources are used because time did not permit consulting primary documents. Consequently statistical data is incomplete and may, in some instances, be questionable." Just what secondary sources were used is not reported. Nevertheless, the source contains many tabulations and charts, and includes a chapter entitled "Quantitative Analysis." So apparently the values were considered sufficiently trustworthy to be reported in quantitative form.

d. We took the QUICKWIN data from the source's Figure 5. It does not say where it obtained its information, but apparently it is from a variety of sources. Their presentation in a single table implies that they are on a roughly comparable basis.

e. Distance is defined as (p 20) "[After preparing the narrative accounts] distances advanced during the campaign, or during the critical period of the campaign, were then determined for selected units (or as an average of the force as a whole, whichever seemed most reasonable and was facilitated by the availability of suitable data and maps)." What defines the duration of the campaign—or of its "critical period" is unspecified. Tabulated values are characterized as "Total Distance Considered," which in three cases (Russia, Barbarossa, and Malaya) differs from other values characterized as "Total Distance in Campaign." No indication is given as to whether the distance is "for selected units" or is instead "an average of the force as a whole."

f. Time interval is not defined, but is characterized as "Days in Campaign," or as "Days to Decision." For 21 of the 30 operations, these time intervals coincide, and in nine they differ. In six of the nine instances where they differ, rates are based on the days to decision, but in three instances rates are based on the days in campaign. The source does not comment on these differences.

g. Several situational descriptors are used (e.g., "weapons quality," "political involvement," "simplicity," etc.), but these are not defined in an objectively measurable way.

3. Discussion and Comments:

a. It is hard to tell just what the source means by many of its descriptors, such as "preponderance of effective force strength." Also, it is hard to judge the extent to which the values assigned to these descriptors are *post hoc*, and hence are affected by the vicious circle referred to elsewhere. The key question is whether those values were or could have been foretold before the campaign was conducted, rather than being based on after-the-fact knowledge of the campaign's results. Leadership and planning are prime examples. If the campaign turns out badly for side A, that is strong evidence that side A's planning and/or leadership were faulty. But evidently *before* the campaign was conducted side A considered its planning and leadership to be adequate—for otherwise it would have changed them. Other examples could be cited, but the point is clear.

b. In several cases, the time intervals presented in the source's Figure 5 (which is a table giving, among other things, the dates, time intervals, distances, and rates of advance for the operations studied) do not agree with the starting and ending dates given in the same table. In our data base, the rates have been recalculated by assuming the distances and the start-end dates to be accurate.

c. In Figure 5 of the source, the column labeled "Distance, km/day" clearly should read "Average Rate of Advance, km/day."

d. The average rate of advance shown for Appomattox and for Malaya in Figure 5 of the source are incorrect (i.e., not consistent with the distance and duration cited there). To two significant digits, they should read 17 and 18 km/day, respectively. For our work, we assumed that the distances and start-end dates were accurate and computed elapsed times and rates from them, rather than use those in the original tabulations.

e. A tabulation very similar to that of the source's Figure 5 is given in Figure 8 of the Breakthrough report ("A Study of Breakthrough Operations," HERO, October 1976, Historical Evaluation and Research Organization, AD-A036 492). In fact, the Breakthrough report gives distances, durations, and rates of advance for exactly the same 30 campaigns as the source. In the Breakthrough report, the average rates of advance for Appomattox and Malaya are given correctly. However, there are other discrepancies between these two tabulations, as indicated in the list of examples below. Neither paper comments on these differences, although presumably they arise partly from considering different portions of the campaigns. Since the "days to breakthrough" values of the Breakthrough paper are usually only a small fraction of the days elapsed from the start to the end of the campaign, it is hard to tell just what part of the campaign the Breakthrough tabulation represents. In our work, we used the distances and (corrected) durations from the source. Using the alternative values from the Breakthrough report would not materially affect our results.

Examples of discrepancies between the Quick Wins and Breakthrough data

<u>Operation</u>	<u>Values in Breakthrough</u>	<u>Values in Quick Wins</u>
Megiddo	$70/2 = 35^*$	$310/14 = 22$
Flanders	$10/2 = 5$	$545/26 = 21$
Cobra	$21/3 = 7$	$880/32 = 28$
Manchuria	$160/8 = 20$	$450/12 = 38$
North Korean Offensive	$50/3 = 17$	$560/42 = 13$
Jitra (Malaya)	$10/1 = 10$	$515/32 = 16$

* Distance (km) / Time (days) = Rate (km/day)

f. We also found similar occasional discrepancies between the QUICKWIN data and those reported for ostensibly the same operations in Dupuy, Trevor N., "Analysing Trends in Ground Combat," History, Numbers and War: A HERO Journal, Vol. 1, No. 2, Summer 1977, pp 77-91, and Dupuy, Trevor N., "A Fallacy of American Combat Simulations: Rates of Advance are *NOT* Proportional to Force Ratios," History, Numbers and War: A HERO Journal, Vol. 1, No. 2, Summer 1977, pp 103-114.

4. Data Table Notes: Presumably these advances are by forces that were but lightly engaged.

PART 1 OF 2

QUICKWIN

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (HOURS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	Marengo	Italy	NU	350	NU	32	10.94	14-May-1800	14-Jun-1800	Lite	Foot	NA
2	Ulm	Germany	NU	475	NU	22	21.59	26-Sep-1805	17-Oct-1805	Lite	Foot	NA
3	Jena	Saxony	NU	140	NU	6	23.33	09-Oct-1806	14-Oct-1806	Lite	Foot	NA
4	Friedland	East Prussia	NU	210	NU	10	21.00	05-Jun-1807	14-Jun-1807	Lite	Foot	NA
5	Danube	Austria-Hungary	NU	405	NU	30	13.50	22-Apr-1809	21-May-1809	Heavy	Foot	NA
6	Russia	Russia	NU	680	NU	57	11.93	24-Jun-1812	19-Aug-1812	Heavy	Foot	NA
7	Lutzen-Bautzen	Saxony (Germany)	NU	300	NU	20	15.00	01-May-1813	20-May-1813	Heavy	Foot	NA
8	Vicksburg	Mississippi	NU	190	NU	19	10.00	01-May-1863	19-May-1863	Medium	Foot	NA
9	Savannah-Raleigh	Georgia-Carolina	NU	1010	NU	125	8.08	10-Dec-1864	13-Apr-1865	Lite	Foot	NA
10	Appomattox	Virginia	NU	100	NU	7	14.29	03-Apr-1865	09-Apr-1865	Lite	Horse	NA
11	Sadowa	Czechoslovakia	NU	230	NU	18	12.78	16-Jun-1866	03-Jul-1866	Medium	Foot	NA
12	Metz-Sedan	France	NU	390	NU	30	13.00	03-Aug-1870	01-Sep-1870	Heavy	Foot	NA
13	Marne	France	NU	560	NU	28	20.00	14-Aug-14	10-Sep-14	Medium	Foot	NA
14	Caporetto	Italy	NU	160	NU	20	8.00	24-Oct-17	12-Nov-17	Medium	Foot	NA
15	Third Gaza	Gaza	NU	150	NU	40	3.75	31-Oct-17	09-Dec-17	Medium	Foot	NA
16	Somme	France	NU	110	NU	16	6.88	21-Mar-18	05-Apr-18	Heavy	Foot	NA
17	Megiddo	Palestine	NU	310	NU	14	22.14	19-Sep-18	02-Oct-18	Medium	Horse	NA
18	Flanders	Belgium	NU	545	NU	26	20.96	10-May-40	04-Jun-40	Medium	Motor	NA
19	Barbarossa	USSR	NU	700	NU	25	28.00	22-Jun-41	16-Jul-41	Heavy	Motor	NA
20	Malaya	Malaya	NU	515	NU	32	16.09	08-Dec-41	08-Jan-42	Heavy	Foot	NA
21	Luzon I	Philippines	NU	310	NU	48	6.46	10-Dec-41	26-Jan-42	Medium	Foot	NA
22	Caucasus	USSR	NU	775	NU	34	22.79	21-Jul-42	23-Aug-42	Medium	Motor	NA
23	Cobra	Normandy	NU	880	NU	32	27.50	01-Aug-44	01-Sep-44	Medium	Motor	NA
24	Luzon II	Philippines	NU	230	NU	27	8.52	09-Jan-45	04-Feb-45	Heavy	Motor	NA
25	Manchuria	Manchuria	NU	450	NU	12	37.50	09-Aug-45	20-Aug-45	Medium	Motor	NA
26	N. Korean Offensive	Korea	NU	560	NU	42	13.33	25-Jun-50	05-Aug-50	Medium	Foot	NA
27	UN Offensive	Korea	NU	790	NU	42	18.81	15-Sep-50	26-Oct-50	Lite	Motor	NA
28	Sinai Campaign	Sinai	NU	220	NU	4	55.00	05-Jun-67	08-Jun-67	Lite	Motor	NA
29	Samaria	Samaria	NU	80	NU	3	26.67	05-Jun-67	07-Jun-67	Medium	Motor	NA
30	Golan	Golan	NU	35	NU	2	17.50	09-Jun-67	10-Jun-67	Lite	Motor	NA

PART 2 OF 2

QUICKWIN

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
1	Marengo	NA	NA	NA	NA	Severe terrain difficulties
2	Ulm	NA	NA	NA	NA	
3	Jena	NA	NA	NA	NA	
4	Friedland	NA	NA	NA	NA	
5	Danube	NA	NA	NA	NA	
6	Russia	NA	NA	NA	NA	
7	Lutzen-Bautzen	NA	NA	NA	NA	
8	Vicksburg	NA	NA	NA	NA	
9	Savannah-Raleigh	NA	NA	NA	NA	
10	Appomattox	NA	NA	NA	NA	
11	Sadowa	NA	NA	NA	NA	
12	Metz-Sedan	NA	NA	NA	NA	
13	Marne	NA	NA	NA	NA	
14	Caporetto	NA	NA	NA	NA	Severe terrain difficulties
15	Third Gaza	NA	NA	NA	NA	Bad terrain difficulties
16	Somme	NA	NA	NA	NA	
17	Megiddo	NA	NA	NA	NA	
18	Flanders	NA	NA	NA	NA	
19	Barbarossa	NA	NA	NA	NA	
20	Malaya	NA	NA	NA	NA	Bad terrain difficulties
21	Luzon I	NA	NA	NA	NA	Bad terrain difficulties
22	Caucasus	NA	NA	NA	NA	
23	Cobra	NA	NA	NA	NA	
24	Luzon II	NA	NA	NA	NA	Bad terrain difficulties
25	Manchuria	NA	NA	NA	NA	Bad terrain difficulties
26	N. Korean Offensive	NA	NA	NA	NA	Bad terrain difficulties
27	UN Offensive	NA	NA	NA	NA	Bad terrain difficulties
28	Sinai Campaign	NA	NA	NA	NA	
29	Samaria	NA	NA	NA	NA	
30	Golan	NA	NA	NA	NA	Bad terrain difficulties

RADZIEV

1. Data Source:

- a. Title: Tankovii Udar [Tank Attack: Tank Armies in Offensive Operations of the Fronts According to the Experience of the Great Patriotic War] (in Russian)
- b. Author: Radzievskii, Professor General of the Army Aleksii Ivanov
- c. Date: 1977
- d. Organization: Order of the Workers of the Red Banner, Military Publishing House, Ministry of Defence, Moscow
- e. Number: NA
- f. Available from: Publisher and libraries

2. Data Description:

- a. The data are taken from the source's Appendix 3 "Selected Indices of Offensive Operations of Tank Armies in the Years 1943-1945." This gives the "Maximum Speed of Advance" for several operations. However, the source does not define exactly what is meant by that.
- b. The source provides copious references to the Archives of the USSR Ministry of Defense. But it does not say exactly where it obtained its information on maximum speeds of advance.

3. Discussion and Comments: Some portions of these data can be compared to data on Soviet advances given elsewhere. See, for example, portions of the data bases CDB90, EASTFRON, GLANTZ, ORALFORE, RECORD, SAVKIN, and ROWLAND. See also HERO Combat Data Subscription Service (Volume I, No. 1, 1975; Volume II, No. 1, Winter 1976; Volume II, No. 3, 1977; and Volume II, No. 4, 1978). See also Losik, O. A. (ed.), "Organization and Tactical Employment of Soviet Tank Forces During the Great Patriotic War," Military Publishing House, Ministry of Defense, USSR, Moscow, 1979.

4. Data Table Notes: The rates given in this table are *maximum* rates.

PART 1 OF 2

RADZIEV

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	Orlovsk	2nd Tank Army	NU	115	NU	NU	8	NA	NA	NA	NA	NA
2	Orlovsk	3rd Guards Tank Army	NU	95	NU	NU	20	NA	NA	NA	NA	NA
3	Orlovsk	4th Tank Army	NU	95	NU	NU	18	NA	NA	NA	NA	NA
4	Belgorod-Kharkov	1st Tank Army	NU	150	NU	NU	35	NA	NA	NA	NA	NA
5	Belgorod-Kharkov	5th Guards Tank Army	NU	120	NU	NU	28	NA	NA	NA	NA	NA
6	Kiev	3rd Guards Tank Army	NU	120	NU	NU	40	NA	NA	NA	NA	NA
7	Zhitomir-Berdichev	1st Tank Army	NU	180	NU	NU	35	NA	NA	NA	NA	NA
8	Zhitomir-Berdichev	3rd Guards Tank Army	NU	180	NU	NU	35	NA	NA	NA	NA	NA
9	Korsun-Shevchenkovsky	5th Guards Tank Army	NU	75	NU	NU	40	NA	NA	NA	NA	NA
10	Korsun-Shevchenkovsky	6th Tank Army	NU	80	NU	NU	40	NA	NA	NA	NA	NA
11	Proskurov-Chernovtsy	1st Tank Army	NU	250	NU	NU	30	NA	NA	NA	NA	NA
12	Proskurov-Chernovtsy	3rd Guards Tank Army	NU	300	NU	NU	30	NA	NA	NA	NA	NA
13	Proskurov-Chernovtsy	4th Tank Army	NU	300	NU	NU	25	NA	NA	NA	NA	NA
14	Uman-Botoshanii	2nd Tank Army	NU	250	NU	NU	65	NA	NA	NA	NA	NA
15	Uman-Botoshanii	5th Guards Tank Army	NU	300	NU	NU	40	NA	NA	NA	NA	NA
16	Uman-Botoshanii	6th Tank Army	NU	300	NU	NU	40	NA	NA	NA	NA	NA
17	Vitebsk-Orshansky	5th Guards Tank Army	NU	125	NU	NU	75	NA	NA	NA	NA	NA
18	Minsk	5th Guards Tank Army	NU	130	NU	NU	60	NA	NA	NA	NA	NA
19	Lvov-Sandomierz	1st Guards Tank Army	NU	400	NU	NU	60	NA	NA	NA	NA	NA
20	Lvov-Sandomierz	3rd Guards Tank Army	NU	330	NU	NU	60	NA	NA	NA	NA	NA
21	Lvov-Sandomierz	4th Tank Army	NU	350	NU	NU	55	NA	NA	NA	NA	NA
22	Lyublin-Brest	2nd Tank Army	NU	300	NU	NU	60	NA	NA	NA	NA	NA
23	Yassy-Kishiniev	6th Tank Army	NU	300	NU	NU	65	NA	NA	NA	NA	NA
24	Budapest	6th Guards Tank Army	NU	200	NU	NU	30	NA	NA	NA	NA	NA
25	Vistula-Oder	1st Guards Tank Army	NU	610	NU	NU	75	NA	NA	NA	NA	NA
26	Vistula-Oder	2nd Guards Tank Army	NU	705	NU	NU	90	NA	NA	NA	NA	NA
27	Vistula-Oder	3rd Guards Tank Army	NU	480	NU	NU	50	NA	NA	NA	NA	NA
28	Vistula-Oder	4th Tank Army	NU	400	NU	NU	60	NA	NA	NA	NA	NA
29	Veynsk	6th Guards Tank Army	NU	320	NU	NU	25	NA	NA	NA	NA	NA
30	East-Prussia	5th Guards Tank Army	NU	250	NU	NU	50	NA	NA	NA	NA	NA
31	East Pomerania	1st Guards Tank Army	NU	140	NU	NU	30	NA	NA	NA	NA	NA
32	East Pomerania	2nd Guards Tank Army	NU	140	NU	NU	40	NA	NA	NA	NA	NA
33	Berlin	1st Guards Tank Army	NU	110	NU	NU	20	NA	NA	NA	NA	NA
34	Berlin	2nd Guards Tank Army	NU	130	NU	NU	25	NA	NA	NA	NA	NA
35	Berlin	3rd Guards Tank Army	NU	130	NU	NU	50	NA	NA	NA	NA	NA
36	Berlin	4th Guards Tank Army	NU	170	NU	NU	50	NA	NA	NA	NA	NA
37	Prussia	3rd Guards Tank Army	NU	180	NU	NU	90	NA	NA	NA	NA	NA
38	Prussia	4th Guards Tank Army	NU	190	NU	NU	90	NA	NA	NA	NA	NA
39	Prussia	6th Guards Tank Army	NU	180	NU	NU	60	NA	NA	NA	NA	NA
40	Manchuria	6th Guards Tank Army	NU	820	NU	NU	180	NA	NA	NA	NA	NA

RADZIEV

CAA-RP-90-04

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
1	Orlovsk	NA	NA	Army		
2	Orlovsk	NA	NA	Army		
3	Orlovsk	NA	NA	Army		
4	Belgorod-Kharkov	NA	NA	Army		
5	Belgorod-Kharkov	NA	NA	Army		
6	Kiev	NA	NA	Army		
7	Zhitomir-Berdichev	NA	NA	Army		
8	Zhitomir-Berdichev	NA	NA	Army		
9	Korsun-Shevchenkovsky	NA	NA	Army		
10	Korsun-Shevchenkovsky	NA	NA	Army		
11	Proskurov-Chernovtsy	NA	NA	Army		
12	Proskurov-Chernovtsy	NA	NA	Army		
13	Proskurov-Chernovtsy	NA	NA	Army		
14	Uman-Botoshanii	NA	NA	Army		
15	Uman-Botoshanii	NA	NA	Army		
16	Uman-Botoshanii	NA	NA	Army		
17	Vitebsk-Orschansky	NA	NA	Army		
18	Minsk	NA	NA	Army		
19	Lvov-Sandomierz	NA	NA	Army		
20	Lvov-Sandomierz	NA	NA	Army		
21	Lvov-Sandomierz	NA	NA	Army		
22	Lyublin-Brest	NA	NA	Army		
23	Yassy-Kishiniev	NA	NA	Army		
24	Budapest	NA	NA	Army		
25	Vistula-Oder	NA	NA	Army		
26	Vistula-Oder	NA	NA	Army		
27	Vistula-Oder	NA	NA	Army		
28	Vistula-Oder	NA	NA	Army		
29	Veynsk	NA	NA	Army		
30	East-Prussia	NA	NA	Army		
31	East Pomerania	NA	NA	Army		
32	East Pomerania	NA	NA	Army		
33	Berlin	NA	NA	Army		
34	Berlin	NA	NA	Army		
35	Berlin	NA	NA	Army		
36	Berlin	NA	NA	Army		
37	Prussia	NA	NA	Army		
38	Prussia	NA	NA	Army		
39	Prussia	NA	NA	Army		
40	Manchuria	NA	NA	Army		

RAND

1. Data Source:

a. Title: The Rate of Advance of the Front Line in Some World War II Campaigns

b. Author: Mulholland, R. P., and R. D. Specht

c. Date: 16 April 1953

d. Organization: The RAND Corporation

e. Number: RM-1072

f. Available From: RAND

2. Data Description:

a. Motivated by issues arising in wargames, this document aims to present some historical data on the velocity of the frontline and strengths of the opposing forces in the European and Mediterranean Theaters of World War II.

b. The specific operations studied are:

- (1) Sicily, D to D+30
- (2) Salerno to Winter Line (Italy), D to D+60
- (3) First US Army, Normandy to St. Lo, D to D+40
- (4) Battle of the Bulge, D to D+40
- (5) First US Army, Breakout to the Westwall, D to D+120
- (6) Seventh US Army, October 1944 to February 1945, D to D+150
- (7) European Theater of Operations, D to D+300

c. The source obtained its data from (p 9) "These data are taken from the After Action Reports and Histories of the various Allied Armies and from other documents listed in the Bibliography."

d. Distance is defined as (p 9) "Rates of advance are estimated from the situation maps of the campaigns."

e. Time interval is not defined. What calendar dates the authors intended to include in their intervals from D to D + (whatever) are never explicitly stated.

f. (pp 8-9) "We ignore terrain, climate, initiative, logistic support, air support, the tactical situation, quality of personnel and equipment, mobility, etc., and seek such gross relation as may exist merely between the Allied and Axis strengths and the rate of advance of the battle line. The strength of each side is measured by the number of equivalent divisions in the line; this number is corrected by such numerical values for manpower and estimates of equivalent strength as we could find."

3. Discussion and Comments:

a. This is an important study, and it appears to be the first to propose a specific functional relation, founded upon historical analysis rather than speculation, for the effect of force ratio upon rate of advance.

b. The manner in which equivalent strengths are obtained is somewhat obscure. Apparently, the number of divisions "in line" on each side was used, unless information suggesting a modification of that value to yield "equivalent divisions" was available. The operations studied are very large indeed, so the strength appears to be that for the entire theater, while the advances would appear to be those of the leading elements only. Accordingly, unless carefully justified, the results should not be "scaled down" to lower echelons, such as divisions, brigades and battle groups, or battalions.

c. Some of the data are correlated (i.e., partly redundant). For example, the advance in the European Theater of Operations, D to D+300 depended on the results of operations 2b(3) through 2b(6), and so is hardly independent of them.

4. Data Table Notes: This report presents its data only in graphical form. Consequently, specific values are no longer readily recoverable. Unfortunately, it was not feasible in the course of this work to convert it back into digital (tabular or numerical) form. Accordingly, no data table is provided for this data source. However, the source is cited for the sake of completeness.

RECORD

1. Data Source:

- a. Title: Armored Advance Rates: A Historical Inquiry
- b. Author: Record, Jeffrey
- c. Date: September 1973
- d. Organization: Military Review, pp 63-72
- e. Number: September 1973
- f. Available From: Libraries

2. Data Description:

- a. This article's purpose is to question the validity of Soviet General Staff Guidelines calling for sustained rates of advance of 70 miles per day.
- b. The operations studied include:
 - (1) German XIX Corps from Border to Channel, May 1941
 - (2) German 2nd Panzer Group from start of Barbarossa to Smolensk, June 1941
 - (3) German Afrika Korps, advance to Mersa Matruh, June 1942
 - (4) British 8th Army, El Alamein Offensive, October 1942
 - (5) US Third Army from Avranches to Troyes, August 1944
 - (6) Israeli units in Six-Day War, June 1967
- c. The source obtained its information from various history books, which are cited in its bibliography.
- d. Environmental and operational factors such as how the distances and elapsed times are defined, what weather, terrain, and degree of enemy resistance are not specified. However, presumably enemy resistance was slight to negligible.

3. Discussion and Comments:

- a. The evidence presented is largely anecdotal and cannot serve as a basis for overgeneralization or overextrapolation.
- b. Some of the Soviet operations in these data can be compared to data on Soviet advances given elsewhere. See, for example, portions of the data bases CDB90, EASTFRON, GLANTZ, ORALFORE, RADZIEV, SAVKIN, and ROWLAND. See also HERO Combat Data Subscription Service (Volume I, No. 1, 1975; Volume II, No. 1, Winter 1976; Volume II, No. 3, 1977; and Volume II, No. 4, 1978). See also the SIMPKIN note in Appendix B, and Losik, O. A. (ed.), "Organization and Tactical Employment of Soviet Tank Forces During the Great Patriotic War," Military Publishing House, Ministry of Defense, USSR, Moscow, 1979.

4. Data Table Notes: These advances were presumably by forces that were either unopposed or but lightly engaged.

PART 1 OF 2

RECORD

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	XIX Corps	Border to Sedan & Meuse R.	100	160.93	3	3	53.64	10-May-41	12-May-41	LITE	MOTOR	NA
2	XIX Corps	Capture Sedan & Cross Meuse R.	17.67	28.44	4	4	7.11	13-May-41	16-May-41	HVY	MOTOR	NA
3	XIX Corps	Sedan to Channel	175	281.64	19	19	14.82	17-May-41	04-Jun-41	LITE	MOTOR	NA
4	XIX Corps	Overall	300	482.80	26	26	18.57	10-May-41	04-Jun-41	LITE	MOTOR	NA
5	2nd Panzer Group	Barbarossa Advance from Bug R.	35	56.33	1	1	56.33	22-Jun-41	22-Jun-41	LITE	MOTOR	NA
6	2nd Panzer Group	Barbarossa Bug R. to Minsk	200	321.87	6	6	53.64	22-Jun-41	27-Jun-41	LITE	MOTOR	NA
7	2nd Panzer Group	Barbarossa Minsk to Smolensk	210	337.96	18	18	18.78	28-Jun-41	15-Jul-41	LITE	MOTOR	NA
8	2nd Panzer Group	Overall	410	659.83	24	24	27.49	22-Jun-41	15-Jul-41	LITE	MOTOR	NA
9	Afrika Corps	Advance To Mersa Matruh	100	160.93	1	1	160.93	25-Jun-42	25-Jun-42	LITE	MOTOR	DESERT
10	British 8th Army	El Alamein Offensive	18	28.97	13	13	2.23	23-Oct-42	04-Nov-42	HVY	MOTOR	DESERT
11	US Third Army	Avranches to Le Mans	75	120.70	3	3	40.23	04-Aug-44	06-Aug-44	LITE	MOTOR	NA
12	US Third Army	Le Mans to Dreux	90	144.84	8	8	18.11	07-Aug-44	14-Aug-44	LITE	MOTOR	NA
13	US Third Army	Mele-sur-Sarthe to Nogent-le-Roi	60	96.56	1	1	96.56	15-Aug-44	15-Aug-44	LITE	MOTOR	NA
14	US Third Army	Nogent-le-Roi to Chartres	35	56.33	1	1	56.33	16-Aug-44	16-Aug-44	LITE	MOTOR	NA
15	US Third Army	Chartres to Chateau Thierry	100	160.93	9	9	17.88	17-Aug-44	25-Aug-44	LITE	MOTOR	NA
16	US Third Army	Le Mans to Orleans	65	104.61	13	13	8.05	04-Aug-44	16-Aug-44	HVY	MOTOR	NA
17	US Third Army	Orleans to Troyes	105	168.98	9	9	18.78	17-Aug-44	25-Aug-44	LITE	MOTOR	NA
18	US Third Army	Overall	255	410.38	22	22	18.65	04-Aug-44	25-Aug-44	LITE	MOTOR	NA
19	Six-Day War	Sinai	50	80.47	1	1	80.47	05-Jun-67	05-Jun-67	LITE	MOTOR	DESERT
20	Six-Day War	To El Arish & Beyond	75	120.70	1	1	120.70	05-Jun-67	05-Jun-67	LITE	MOTOR	DESERT
21	Six-Day War	Bir Hasana to Gebel Heitan	70	112.65	1	1	112.65	07-Jun-67	07-Jun-67	LITE	MOTOR	DESERT
22	Six-Day War	Gebel Heitan to Abu Zenima	120	193.12	1	1	193.12	08-Jun-67	08-Jun-67	LITE	MOTOR	DESERT

PART 2 OF 2

RECORD

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
1	XIX Corps	NA	NA	CORPS	Guderian	
2	XIX Corps	NA	NA	CORPS	Guderian	
3	XIX Corps	NA	NA	CORPS	Guderian	
4	XIX Corps	NA	NA	CORPS	Guderian	
5	2nd Panzer Group	NA	NA	GROUP	Guderian	
6	2nd Panzer Group	NA	NA	GROUP	Guderian	
7	2nd Panzer Group	NA	NA	GROUP	Guderian	
8	2nd Panzer Group	NA	NA	GROUP	Guderian	
9	Afrika Korps	NA	NA	CORPS	Rommel	Forward echelons only
10	British 8th Army	NA	NA	ARMY	Montgomery	
11	US Third Army	NA	NA	CORPS	Patton	XV Corps
12	US Third Army	NA	NA	CORPS	Patton	XV Corps
13	US Third Army	NA	NA	CORPS	Patton	XX Corps
14	US Third Army	NA	NA	CORPS	Patton	XX Corps
15	US Third Army	NA	NA	CORPS	Patton	XX Corps
16	US Third Army	NA	NA	CORPS	Patton	XII Corps
17	US Third Army	NA	NA	CORPS	Patton	XII Corps
18	US Third Army	NA	NA	ARMY	Patton	
19	Six-Day War	NA	NA	NA		"Israeli armored spearheads"
20	Six-Day War	NA	NA	DIV	Tal	Tal Division
21	Six-Day War	NA	NA	DIV	Yoffe	Yoffe Division
22	Six-Day War	NA	NA	DIV	Yoffe	Yoffe Division

RMC

1. Data Source:

- a. Title: Research Study on Predictive War Game Factors: Final Report
- b. Author: Cockrell, James K., and Donn Carter
- c. Date: March 1974
- d. Organization: RMC Research Corporation
- e. Number: Prepared for SHAPE Technical Centre, Contract C.72-03
- f. Available from: SHAPE Technical Centre, The Hague

2. Data Description:

a. The source's data sets were assembled by a study team led by Mr. James Cockrell of the RMC Research Corporation's RMC Systems Group, supported by one or more contracts with the SHAPE Technical Centre (STC), and carried out under the guidance of Dr. Rex Goad of STC. (p 1, Introduction) "The purpose of the effort was to produce data and algorithms that can be used in SHAPE computer war games to predict the outcome of engagements between ground units in non-nuclear war situations. Outcome measures were to be distance advanced and primary resource attrition suffered in 24-hour periods."

b. The data are from two major operations, as described below.

(1) The Ardennes Data Set. The Ardennes data set is described by the source as being for a nominal 24-hour period and a nominal division level (actually brigade to division size) on the attacking side. Advances were measured as the maximum penetrations achieved and held during approximately 24-hour periods. The Ardennes data set consists of a total of 150 attack days (49 US attacking German, 15 US attacking German with a German counterattack, 73 German attacking US, and 13 German attacking US with a US counterattack). In each case the attacker was confronted by a defense in place, as opposed to a delay. All of these actions took place during the first 18 days (16 December 1944 to 2 January 1945) of the Ardennes Campaign of WWII (Battle of the Bulge). For this part of our data base we used the source's table on pages B-6 through B-9 of its Appendix B.

(2) The Lorraine Data Set. Appendix B of the source states that the data collection process used for the Lorraine data set was the same as for the Ardennes data set. The Lorraine data set consists of 100 attack days (63 US attacking German, 19 US attacking German with a German counterattack, 9 German attacking US, 9 German attacking US with a US counterattack). All of these actions took place between 8 September and 27 November 1944 in eastern France. For this part of our data base we used the source's table on pages E-17 through E-19 of its Appendix E.

c. (p 7) "The US National Archives Captured Records Center was the primary source for German unit records and other documents. These included microfilmed copies of unit operational records, war maps, and results of interviews or responses from captured German division, corps, and army commanders and staff officers. ... For US battle day information the primary source was the National Records Center of the Archives. After action reports, daily and other periodic reports, journal files, histories, and order of battle studies from Army level down to battalion level were examined to establish the composition, location, disposition, mission and activity of the units of interest." For the Ardennes data set, supplemental mobility and visibility information apparently were collected by Cockrell and his colleagues in the early 1970s by visiting

the site of the battle at the corresponding time of year and making visibility and maneuverability estimates (see the source's p 155). (p 69) "The terrain analysis for the Lorraine data set was made without the benefit of a terrain reconnaissance and is not considered to be as accurate as is that used in the Ardennes data sample."

d. (p B-2) "Attack missions were coded as obtained from recorded mission statements. *Limited objective attacks or counterattacks which were considered to have been limited by mission considerations rather than by resources were not included in the sample* (emphasis added). For example, an attack clearly conducted to restore the frontline would not be included. Also left out were any reported attacks where there appeared to be significant question as to whether an attack was really made." (p 6) "... it was important to avoid 'pseudo attacks' and delaying actions in which the results of a day's actions were dictated by considerations other than an attack mission opposed by a defense mission."

e. Distance is defined as (p B-5) "Advances were measured to within 100 meters from the line occupied by the defense when the day's fighting began—that is, only penetration distance was counted, not advance-to-the-assault-position distance." (pp 67-68) "Many days in which there were division attacks during this period [Lorraine Campaign] could not be included in the data set because there was insufficient data on either the German or the US force, or there was evidence that a German defending force had withdrawn rather than attempting to defend its positions against a US attack. (Whenever an attack struck a defended position to which the defender had withdrawn, the ensuing battle was recorded from that point on, as if the attack had begun at that point—as long as this did not occur toward the end of a day of attacker movement, because it was observed that in such cases the attack was usually not continued long after dark.)"

f. Time intervals are defined as (p 6) "These [data collection and other considerations] combined to indicate a nominal 24-hour period and a nominal division level on the attack force side as natural separation points."

g. The source data include such situational descriptors as the sector of the front, the date, the attacker's strength in number of infantry platoon equivalents, tank strength, antitank firepower, artillery firepower, personnel casualties, tank and tank-equivalent losses, visibility, mobility, attacker and defender postures or missions, and the distance advanced. The technical definitions and detailed codes used to describe all these items are too complex to summarize readily. See the RMC report and the Data Table Notes below for details.

3. Discussion and Comments:

a. This study represents a major effort to assemble a substantial data base, and to apply powerful multivariate statistical analysis methods to extract from it solid relationships that could be used to model attrition and advance rates in wargames and simulations. Its data are for forces that were heavily engaged.

b. (p 73) "The indication that [the Lorraine] data set is not taken from the same population as the Ardennes set may be the result of data errors. It was found during the long series of regressions using the Ardennes set that data errors are difficult to identify and that the best indicator of error is peculiar behavior of regression results—analysis of these then leads back to particular elements of the data and rigorous reexamination then frequently exposes errors. It was not possible to perform any such analyses on the [Lorraine] data set because of contract fund limitations, and it is likely that at least some of the difference between the two sets is due to the [Lorraine] data set not having been 'shaken down'." However, this process could also focus attention on errors in the "non-fitting" data values to the exclusion of errors in the "fitting" data—a focus on

Type I errors to the neglect of Type II errors.

c. Some portion of the attacks were night attacks (cf. p 16 and p 20), but this information has not been recorded in the RMC report (except through the Visibility codes, which are surrogates for many different kinds of visibility-degrading conditions). The source observes that the Germans conducted night attacks substantially more often than did the US. Hence, the visibility conditions are statistically confounded with the side attacking.

d. The general character of the Lorraine and Ardennes campaigns differs in three principal ways.

(1) In the Lorraine campaign, troops were less concentrated on both sides, resulting in more isolated battles rather than in linear front action.

(2) Water courses in the Lorraine area at the time were flooded and limited the movement of tanks to captured or erected bridges. Infantry were less restricted. In the Ardennes, tank movement was significantly less restricted most of the time.

(3) A higher percentage of brigade-size attack forces occur in the Lorraine data set than in the Ardennes data set.

e. The following works summarize and/or analyze various aspects of the source data.

(1) Goad, Rex, "Prediction of Opposed Movement and Casualty Rates," SHAPE Technical Centre, Professional Paper, STC-PP-75, July 1973.

(2) Cockrell, James K., "Prediction of Advances in Ground Combat," Conference on Modelling Land Battle Systems for Military Planning, Ottobrun, Germany, 1974.

(3) Goad, Rex, "Predictive Equations for Opposed Movement and Casualty Rates for Land Forces," SHAPE Technical Centre, STC-PP-90, The Hague, Netherlands, August 1974, AD-921 726.

(4) Goad, Rex, "The Modelling of Movement in Tactical Games," Professional Paper STC PP-158, Operations Research Division, SHAPE Technical Centre, The Hague, April 1979. (Also published in Operational Research Games for Defense, edited by Reiner K. Huber, Klaus Niemeyer, and Hans W. Hoffmann, R. Oldenburg, Munich and Vienna, 1979.)

(5) Lindley, D. V. and A. M. Skeene, "Predictive Relationships for Opposed Movement and Casualty Rates for Land Forces," unpublished memorandum from Department of Statistics and Computer Science, University College of London, to Dr. Rex Goad of the SHAPE Technical Centre, 24 January 1976.

(6) Schäffer, Alfred, "Determination of the Functional Relation Between the Speeds of Movement and the Loss-Ratios of Military Units in Battle," Graduate Dissertation, ID No. 03-77, Hochschule der Bundeswehr, München, 9 June 1977.

4. Data Table Notes:

a. ID is the sector identification code used by RMC.

b. DATE is the date of the action.

c. ATTACK TYPE CODE is as follows:

0 = A US main attack as part of a continuing offensive

1 = A German attack as part of a continuing offensive

6 = A German attack combined with a US counterattack

7 = A US attack combined with a German counterattack

ATTACK DESCRIP is an alphabetical description of the ATTACK TYPE CODE.

d. POSTURE CODE applies to the defender, and is as follows:

5 = frontline troops in well dug-in positions with at least some overhead cover: an organized, well-prepared defensive position

6 = frontline troops in foxholes with all heavy weapons dug-in

7 = Some elements of the defense as in Level 6, and a significant portion not well dug-in or organized

8 = A hasty defense in which there has not been opportunity to organize the defense or to dig in. This level was also used for "meeting engagements" (i.e., an attack meeting a counterattack, two attacks colliding, etc.)

This procedure was adopted since there was no known method of quantifying the relative worth of each posture level. Thus, the code merely identifies the type posture level for each day.

e. ATTACKER/DEFENDER CODE is as follows:

1 = A US-initiated attack (i.e., Attack Type Code = 0 or 7)

2 = A German-initiated attack (i.e., Attack Type Code = 1 or 6)

f. ARTY US is the number of rounds of US artillery ammunition expended in close (direct support) of that sector on that date.

g. ARTY GER is coded as follows:

1 = low intensity of German artillery

2 = moderate intensity of German artillery

3 = high intensity of German artillery

4 = very high intensity of German artillery

h. Four environment codes are given. The first pair ("ENV LINE" or E1 and E2) are mobility restrictions and visibility ranges in the area of the defensive position. The second pair ("ENV PEN" or E3 and E4) are these same conditions along the axis of penetration. Visibility is the range to which the defender could put well-directed fire on the attacker along the approaches available to the attacker. Mobility is the extent to which all factors combined to hinder the mobility of the attacker.

The codes used for E1 and E3 are:

0 = No restriction on infantry or tank movement

1 = Infantry unrestricted, tanks canalized

2 = Infantry unrestricted, tanks severely canalized

3 = Infantry unrestricted, tanks must breach

4 = Infantry canalized, tanks canalized

5 = Infantry canalized, tanks severely canalized

6 = Infantry canalized, tanks must breach

7 = Infantry canalized, tanks difficult to breach

8 = Infantry must breach, tanks must breach

9 = Infantry and tanks difficult to breach

The codes used for E2 and E4 are:

1 = Not over 100 meters visibility range generally available

2 = Not over 300 meters visibility range generally available

3 = Not over 1000 meters visibility range generally available

4 = Well over 1000 meters visibility range generally available.

i. INF PLTN is an index of the infantry resources available, based on the number of infantry platoons contained in each unit or fraction of a unit listed as being involved in each attack day. A computer program calculated the number of infantry platoons contained in each unit or fraction of a unit listed as being involved in each battle day (i.e., the battalions, etc., listed in the source's Annex A). It did this by using organizational information about each type of unit (e.g., a US parachute infantry battalion contains nine infantry platoons, etc.).

j. ARMOR is the number of tank-like vehicles available, including tanks, assault guns, self-propelled tank destroyers, and German self-propelled antitank guns (Jagdpanzers).

k. ANTIARMOR is a weighted average number of antiarmor weapons using the following weights.

Antitank Weapon System Weighting Factor for the RMC Data

<u>Weapon system</u>	<u>Weighting factor</u>
2-in to 3-in AT rocket launcher (Bazooka or Panzerfaust)	0.10
37mm AT or light tank gun	0.12
57mm AT gun	0.41
76mm AT or medium tank gun	0.70
90mm AT or heavy tank gun	0.79

l. MECZ CODE is the percentage of infantry in the attacking or in the defending force that was mechanized, divided by 10. E.g., an entry of "4" means that 40 percent of the infantry in the force were mechanized.

m. TANK ATTN is the total armor loss rate per thousand armor vehicles per day.

n. PERS ATTN is the personnel battle casualty rate per thousand personnel per day, and is computed on the basis of 40 men per infantry platoon.

o. ADV DIST is measured in units of kilometers, to an accuracy of 0.1 km, from the line occupied by the defense when the day's fighting began. That is, only penetration distance was counted, not advance-to-the-assault-position distance.

p. FRONTAGE is an estimate of the length in kilometers of the part of the frontline which was attacked in each battle day—not merely the points of close contact, but the length of the front the defending force had to protect as a direct result of the attacking force's actions and immediate capabilities.

q. Special note on the Lorraine data set: the listing of the Lorraine data set is identical in format to that of the Ardennes data set. However, as noted in the source, its content differs in that some of the Lorraine data set columns are not complete. This is because the results of RMC's analysis of the Ardennes data set indicated that those data items would not be needed in the Lorraine data set, and at this point in RMC's study available resources would not support any additional work beyond the minimum necessary to complete the effort. Furthermore, in the Lorraine data set the vision-range coding did not attempt to discriminate between the 2 and 3 codes (100-300 meters and 300-700 meters) because this degree of detail would not be recognized in the dummy coding used, and it was hard to obtain from map data.

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NO.	OPERATION ID	DATE	ATTACK TYPE	ATTACK CODE	POSTURE	ATTACKER/DEFENDER	ARTY	ENV LINE	ENV LINE	ENV PEN	ENV E3	ENV E4	INF PLTN	INF PLTN	ARMOR		ANTI-ARMOR		MEC2		TANK		PERS	
															US	GER	US	GER	US	GER	US	GER	US	GER
1	Ardennes 11	16-Dec-44	1	GER	5	2	1000	4	1	2	1	3	13	35	27	20	25	37	4	0	NA	0	NA	
2	Ardennes 21	16-Dec-44	1	GER	5	2	2000	4	2	1	2	1	31	60	17	16	37	34	0	2	NA	125	NA	
3	Ardennes 23	16-Dec-44	1	GER	5	2	1600	4	2	1	2	1	24	66	13	12	29	31	0	0	NA	167	NA	
4	Ardennes 25	16-Dec-44	1	GER	6	2	800	3	2	1	3	3	15	45	6	12	16	28	1	0	NA	83	NA	
5	Ardennes 33	16-Dec-44	1	GER	6	2	900	3	2	1	2	2	18	48	6	29	18	36	1	0	NA	73	NA	
6	Ardennes 34	16-Dec-44	1	GER	5	2	1300	3	2	1	2	2	27	96	9	33	27	53	1	0	NA	177	NA	
7	Ardennes 35	16-Dec-44	1	GER	5	2	1200	2	3	2	1	3	13	46	7	104	14	83	0	10	NA	96	NA	
8	Ardennes 36	16-Dec-44	1	GER	5	2	900	2	2	1	3	1	18	41	15	0	25	15	0	0	14	NA	NA	
9	Ardennes 51	16-Dec-44	1	GER	5	2	900	3	3	2	1	3	18	55	15	120	25	96	0	8	14	25	NA	
10	Ardennes 52	16-Dec-44	1	GER	5	2	500	3	2	1	1	2	9	73	7	40	13	60	0	1	14	0	NA	
11	Ardennes 53	16-Dec-44	1	GER	5	2	500	3	3	1	1	2	9	69	7	0	13	30	0	0	14	NA	NA	
12	Ardennes 61	16-Dec-44	1	GER	5	2	1400	3	8	1	1	2	28	96	22	6	38	27	0	0	14	0	NA	
13	Ardennes 62	16-Dec-44	1	GER	5	2	2000	3	9	1	1	1	10	60	90	0	78	23	10	0	0	NA	62	
14	Ardennes 71	16-Dec-44	1	GER	5	2	1000	3	1	1	1	2	34	41	38	22	56	31	0	0	0	0	34	
15	Ardennes 11	17-Dec-44	1	GER	5	2	1300	3	1	2	1	3	17	40	44	20	37	37	5	0	NA	0	NA	
16	Ardennes 23	17-Dec-44	1	GER	7	2	600	3	2	2	2	4	30	6	10	10	30	30	0	0	NA	300	NA	
17	Ardennes 25	17-Dec-44	1	GER	8	2	100	1	2	2	2	2	9	27	5	79	15	70	0	7	NA	65	NA	
18	Ardennes 34	17-Dec-44	6	GER/US	8	2	2000	2	2	1	1	2	36	83	47	35	61	55	2	0	38	243	NA	
19	Ardennes 35	17-Dec-44	1	GER	5	2	400	2	2	1	2	2	9	19	9	19	14	23	0	5	404	160	191	
20	Ardennes 36	17-Dec-44	1	GER	5	2	900	3	2	1	2	2	18	45	18	75	27	68	0	8	404	160	191	
21	Ardennes 51	17-Dec-44	1	GER	8	2	900	1	1	1	3	2	18	51	18	117	27	94	0	8	404	43	191	
22	Ardennes 52	17-Dec-44	1	GER	8	2	400	3	2	1	1	2	9	80	9	55	14	80	0	2	404	0	191	
23	Ardennes 53	17-Dec-44	1	GER	8	2	400	1	1	2	1	1	9	47	9	20	14	36	0	0	404	100	191	
24	Ardennes 61	17-Dec-44	1	GER	8	2	1300	3	1	1	1	1	26	105	27	6	41	34	0	0	404	NA	191	
25	Ardennes 62	17-Dec-44	1	GER	8	2	1600	3	1	2	0	2	10	58	73	0	66	23	10	0	14	NA	62	
26	Ardennes 71	17-Dec-44	1	GER	6	2	2000	3	1	1	1	2	33	37	45	0	60	15	0	0	27	NA	164	
27	Ardennes 11	18-Dec-44	1	GER	5	2	1100	3	2	2	2	3	42	31	30	20	52	37	3	0	NA	0	NA	
28	Ardennes 21	18-Dec-44	1	GER	6	2	4300	2	2	1	2	2	140	119	112	59	189	89	0	2	36	147	128	
29	Ardennes 25	18-Dec-44	1	GER	7	2	700	1	2	1	2	2	21	11	18	71	30	50	0	8	0	127	7	
30	Ardennes 26	18-Dec-44	1	GER	8	2	1500	1	3	1	2	2	41	8	36	0	60	9	0	10	0	NA	7	
31	Ardennes 33	18-Dec-44	1	GER	7	2	500	1	2	1	2	2	12	24	79	35	70	41	8	0	30	171	172	
32	Ardennes 34	18-Dec-44	1	GER	6	2	2300	1	1	1	3	2	36	62	62	9	69	25	2	0	26	667	537	
33	Ardennes 36	18-Dec-44	1	GER	7	2	100	1	1	1	1	3	28	41	22	79	39	64	0	10	NA	76	NA	
34	Ardennes 51	18-Dec-44	1	GER	8	2	1200	1	7	1	1	2	24	27	70	112	53	88	4	10	302	80	NA	
35	Ardennes 52	18-Dec-44	1	GER	7	2	100	1	2	2	3	2	28	28	17	75	18	72	1	10	NA	67	NA	
36	Ardennes 61	18-Dec-44	1	GER	8	2	1400	3	1	2	1	2	19	95	10	4	25	32	0	0	NA	NA	NA	
37	Ardennes 62	18-Dec-44	1	GER	7	2	1600	1	1	1	1	2	5	56	72	0	64	23	10	0	125	NA	588	
38	Ardennes 71	18-Dec-44	6	GER/US	7	2	3100	3	1	1	1	2	45	53	142	22	142	38	3	0	37	NA	46	
39	Ardennes 23	19-Dec-44	1	GER	5	2	600	2	2	2	2	3	30	9	57	12	56	8	0	10	0	NA	11	
40	Ardennes 24	19-Dec-44	1	GER	6	2	600	2	2	2	2	2	30	54	57	10	56	33	0	0	0	NA	11	
41	Ardennes 25	19-Dec-44	6	GER/US	7	2	1600	1	1	1	2	2	42	17	65	62	78	44	1	9	56	210	21	
42	Ardennes 26	19-Dec-44	6	GER/US	7	2	1200	1	3	2	3	2	32	16	49	0	58	8	1	10	56	NA	21	
43	Ardennes 33	19-Dec-44	1	GER	6	2	1700	1	2	5	0	5	24	61	206	39	176	51	8	0	51	103	83	
44	Ardennes 34	19-Dec-44	1	GER	6	2	800	1	2	2	2	2	40	53	52	3	61	25	1	0	0	0	NA	

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NO.	OPERATION ID	DATE	ATTACK		ATTACK CODE	POSTURE	DEFENDER		ARTY	ENV	LINE	ENV	ENV	ENV	INF	ARMOR		ANTI-	ARMOR	MECZ	TANK	TANK	PERS	
			TYPE	CODE			US	GER								US	GER							US
45	Ardennes	36 19-Dec-44	1	GER	7	7	2	100	1	1	3	1	4	15	41	18	73	13	60	2	10	NA	41	NA
46	Ardennes	51 19-Dec-44	1	GER	8	8	2	1900	1	0	1	0	3	31	37	39	103	35	81	1	10	NA	165	84
47	Ardennes	52 19-Dec-44	1	GER	8	8	2	700	3	1	2	1	4	12	53	24	50	19	52	2	1	741	NA	146
48	Ardennes	53 19-Dec-44	1	GER	8	8	2	700	1	0	2	1	2	34	32	24	73	24	70	1	10	NA	NA	NA
49	Ardennes	61 19-Dec-44	1	GER	7	7	2	1000	3	2	3	1	2	17	67	10	2	24	24	0	0	NA	NA	NA
50	Ardennes	71 19-Dec-44	7	US/GER	7	7	1	4000	3	1	3	1	3	54	51	136	22	143	38	2	0	66	136	67
51	Ardennes	23 20-Dec-44	1	GER	6	6	2	2100	3	2	2	2	3	45	78	82	87	81	77	0	7	0	126	19
52	Ardennes	24 20-Dec-44	1	GER	6	6	2	1400	1	2	1	2	1	30	54	54	10	54	33	0	0	0	NA	19
53	Ardennes	25 20-Dec-44	0	US	6	6	1	2000	1	2	1	2	1	64	18	128	49	126	35	1	9	51	0	64
54	Ardennes	26 20-Dec-44	6	GER/US	6	6	2	1400	1	3	2	1	2	34	24	112	37	103	33	2	10	54	NA	90
55	Ardennes	32 20-Dec-44	1	GER	7	7	2	1800	1	1	3	1	2	8	11	84	36	69	28	8	3	7	250	NA
56	Ardennes	33 20-Dec-44	1	GER	7	7	2	3000	1	1	2	1	2	14	51	140	22	115	38	8	0	7	NA	NA
57	Ardennes	34 20-Dec-44	1	GER	7	7	2	2100	1	2	3	2	2	40	53	52	11	61	30	1	0	27	0	162
58	Ardennes	36 20-Dec-44	1	GER	8	8	2	900	2	1	2	1	2	12	40	105	67	44	55	9	10	NA	45	NA
59	Ardennes	51 20-Dec-44	1	GER	7	7	2	2400	1	0	1	1	3	40	34	46	86	42	69	0	10	NA	163	101
60	Ardennes	53 20-Dec-44	1	GER	7	7	2	1200	2	0	3	0	3	40	77	24	97	25	101	1	4	NA	62	NA
61	Ardennes	61 20-Dec-44	1	GER	6	6	2	900	3	3	1	1	3	16	62	10	2	23	24	0	0	NA	NA	NA
62	Ardennes	62 20-Dec-44	1	GER	6	6	2	1600	3	0	4	0	3	8	49	85	20	50	37	10	0	NA	100	513
63	Ardennes	71 20-Dec-44	6	GER/US	7	7	2	4000	3	1	4	1	4	63	48	131	19	148	36	2	0	24	NA	16
64	Ardennes	23 21-Dec-44	1	GER	6	6	2	5500	4	1	2	1	2	44	51	82	76	81	61	0	10	29	145	64
65	Ardennes	24 21-Dec-44	1	GER	6	6	2	1300	1	1	1	1	2	28	18	37	50	59	35	1	0	115	180	56
66	Ardennes	25 21-Dec-44	7	US/GER	6	6	1	2200	1	2	2	2	2	71	15	117	49	117	35	1	9	108	184	37
67	Ardennes	26 21-Dec-44	7	US/GER	7	7	1	1600	1	1	2	1	2	55	32	104	44	100	37	1	10	108	NA	37
68	Ardennes	31 21-Dec-44	1	GER	7	7	2	400	3	2	3	2	3	5	26	46	0	39	9	8	3	30	NA	NA
69	Ardennes	33 21-Dec-44	1	GER	8	8	2	1100	4	1	4	1	4	14	49	116	22	97	38	8	0	30	NA	NA
70	Ardennes	34 21-Dec-44	1	GER	8	8	2	1500	3	1	2	1	2	41	50	57	11	67	30	2	0	0	0	64
71	Ardennes	35 21-Dec-44	1	GER	7	7	2	400	1	2	5	2	3	7	30	39	12	18	31	6	0	NA	0	NA
72	Ardennes	36 21-Dec-44	1	GER	7	7	2	1500	1	2	2	8	2	11	32	92	67	40	48	9	10	NA	75	NA
73	Ardennes	53 21-Dec-44	1	GER	6	6	2	2000	1	0	1	2	0	36	18	24	46	24	33	1	10	NA	0	NA
74	Ardennes	61 21-Dec-44	1	GER	6	6	2	1700	1	1	1	1	3	15	62	10	2	17	24	0	0	NA	NA	NA
75	Ardennes	71 21-Dec-44	6	GER/US	7	7	2	3900	2	0	3	0	2	52	41	44	19	75	36	0	0	0	NA	23
76	Ardennes	23 22-Dec-44	1	GER	5	5	2	3400	4	1	1	1	1	43	61	79	65	79	60	0	7	45	138	55
77	Ardennes	25 22-Dec-44	0	US	6	6	1	2300	2	1	4	2	2	31	12	91	40	84	28	1	8	44	100	23
78	Ardennes	26 22-Dec-44	7	US/GER	7	7	1	3100	1	2	2	1	2	40	30	102	42	97	35	1	10	39	NA	22
79	Ardennes	34 22-Dec-44	1	GER	8	8	2	1000	3	2	1	2	2	40	48	57	11	67	30	2	0	14	273	21
80	Ardennes	35 22-Dec-44	6	GER/US	7	7	2	1700	2	1	3	1	2	25	29	191	12	112	31	6	0	10	0	NA
81	Ardennes	42 22-Dec-44	1	GFR	7	7	2	1200	1	3	3	0	4	13	28	10	68	16	55	0	10	32	NA	NA
82	Ardennes	54 22-Dec-44	0	US	7	7	1	700	1	7	2	2	2	9	6	83	1	67	4	10	0	NA	NA	NA
83	Ardennes	61 22-Dec-44	0	US	8	8	1	1100	2	1	3	1	4	81	61	82	2	100	24	0	0	24	NA	8
84	Ardennes	71 22-D c-44	7	US/GER	7	7	1	5100	3	2	3	2	2	69	39	66	19	109	36	0	0	0	NA	56
85	Ardennes	25 23-Dec-44	0	US	6	6	1	2100	2	0	2	2	1	36	9	87	36	82	26	1	8	65	222	23
86	Ardennes	26 23-Dec-44	0	US	7	7	1	2800	2	1	2	3	4	46	24	98	42	95	34	1	10	62	NA	22
87	Ardennes	34 23-Dec-44	1	GER	7	7	2	1000	3	2	3	2	4	49	29	115	38	82	27	2	10	9	79	16
88	Ardennes	42 23-Dec-44	1	GER	7	7	2	100	2	0	3	0	3	16	17	178	64	101	51	6	10	0	63	NA

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NO.	OPERATION ID	DATE	ATTACK		POSTURE		ATTACKER/		ARTY		ENV LINE	ENV PEN	ENV E3	ENV E4	INF PLTN	INF GER	ARMOR		ANTI-ARMOR		MECZ		TANK		PERS	
			TYPE	CODE	DESCRIP	CODE	DEFENDER	US	GER	US							GER	US	GER	US	GER	US	GER	US		GER
133	Ardennes	71 27-Dec-44	0	US	8	1	1100	2	1	1	1	1	1	1	75	31	51	17	76	46	0	0	0	0	NA	68
134	Ardennes	52 28-Dec-44	7	US/GER	8	1	100	2	0	3	0	3	0	3	7	27	65	50	38	10	3	61	0	NA	60	
135	Ardennes	54 28-Dec-44	0	US	7	1	1000	2	1	2	1	1	1	10	16	59	1	50	8	8	0	NA	0	129	NA	
136	Ardennes	55 28-Dec-44	0	US	6	1	2100	2	1	3	1	2	80	38	97	18	109	20	0	2	31	NA	33	NA	33	
137	Ardennes	52 29-Dec-44	7	US/GER	8	1	900	2	1	3	1	2	7	47	60	78	46	79	10	9	66	154	43	NA	43	
138	Ardennes	54 29-Dec-44	0	US	6	1	2200	2	1	3	2	2	72	52	28	4	59	27	0	0	71	NA	30	NA	30	
139	Ardennes	55 29-Dec-44	0	US	6	1	1600	1	2	3	1	2	77	43	94	11	107	25	0	0	11	182	35	98	98	
140	Ardennes	51 30-Dec-44	7	US/GER	8	1	2400	2	2	3	0	2	34	40	337	71	281	75	10	7	71	85	98	NA	98	
141	Ardennes	54 30-Dec-44	6	GER/US	8	2	4800	2	1	1	1	3	52	100	128	80	125	86	4	3	63	275	90	NA	90	
142	Ardennes	55 30-Dec-44	0	US	5	1	3200	1	1	5	1	4	75	43	96	9	107	24	0	0	0	NA	43	NA	43	
143	Ardennes	51 31-Dec-44	0	US	6	1	3800	4	0	3	0	3	22	43	264	60	214	66	10	8	38	133	242	NA	242	
144	Ardennes	53 31-Dec-44	0	US	6	1	2500	2	1	1	1	2	14	18	140	3	115	3	10	0	NA	333	150	NA	150	
145	Ardennes	54 31-Dec-44	0	US	6	1	4700	2	1	1	1	1	65	102	33	19	60	60	0	0	30	NA	173	NA	173	
146	Ardennes	55 31-Dec-44	0	US	6	1	3700	2	0	1	0	1	73	43	96	9	107	24	0	0	NA	NA	61	NA	61	
147	Ardennes	51 01-Jan-45	0	US	5	1	3700	3	1	2	1	2	21	29	242	52	197	61	10	8	62	NA	232	NA	232	
148	Ardennes	54 01-Jan-45	0	US	6	1	4000	2	3	2	3	1	76	99	32	18	62	59	0	0	0	NA	46	NA	46	
149	Ardennes	51 02-Jan-45	0	US	5	1	2700	2	1	3	0	2	9	27	117	42	94	54	10	8	60	NA	247	NA	247	
150	Ardennes	54 02-Jan-45	0	US	6	1	3900	2	2	2	1	1	81	73	32	5	64	38	0	0	0	NA	37	NA	37	
151	Lorraine	15 08-Sep-44	0	US	5	1	2500	0	0	3	2	0	26	19	34	0	41	6	3	0	NA	NA	20	NA	20	
152	Lorraine	25 08-Sep-44	7	US/GER	5	1	2200	0	0	4	8	0	10	6	0	1	9	2	1	3	NA	NA	303	NA	303	
153	Lorraine	25 09-Sep-44	1	GER	7	2	2300	0	0	1	1	0	13	14	11	10	20	10	2	7	0	0	190	190		
154	Lorraine	25 10-Sep-44	1	GER	7	2	1600	0	0	1	1	0	11	19	11	3	20	6	3	9	0	0	273	273		
155	Lorraine	26 10-Sep-44	7	US/GER	8	1	1600	0	0	1	8	0	27	19	0	4	13	7	0	9	NA	600	288	NA	288	
156	Lorraine	45 10-Sep-44	0	US	6	1	1000	0	0	2	2	0	57	28	110	0	106	8	0	0	NA	NA	NA	NA	NA	
157	Lorraine	27 11-Sep-44	6	GER/US	6	2	3600	0	0	1	8	0	32	24	16	22	26	22	0	10	63	91	462	NA	462	
158	Lorraine	45 11-Sep-44	0	US	6	1	3400	0	0	1	8	0	27	18	0	0	13	8	0	5	NA	NA	22	NA	22	
159	Lorraine	55 11-Sep-44	0	US	5	1	400	0	0	3	8	0	17	19	88	28	75	26	5	10	0	107	79	NA	79	
160	Lorraine	26 12-Sep-44	1	GER	6	2	1500	0	0	3	2	0	37	33	118	20	97	20	2	10	9	350	82	NA	82	
161	Lorraine	37 12-Sep-44	0	US	6	1	3700	0	0	2	8	0	45	28	27	0	65	6	0	0	0	0	NA	NA	NA	
162	Lorraine	45 12-Sep-44	0	US	7	1	2100	0	0	2	2	0	28	12	26	0	34	0	0	6	0	0	NA	NA	NA	
163	Lorraine	36 13-Sep-44	0	US	8	1	800	0	0	3	2	0	19	3	85	20	61	14	5	10	12	600	37	NA	37	
164	Lorraine	37 13-Sep-44	6	GER/US	6	2	2200	0	0	1	2	0	45	19	27	15	65	17	0	10	185	533	NA	NA	533	
165	Lorraine	45 13-Sep-44	0	US	8	1	3000	0	0	2	2	0	47	17	57	0	69	6	0	10	35	NA	NA	NA	NA	
166	Lorraine	36 14-Sep-44	0	US	8	1	600	0	0	3	2	0	19	9	85	15	61	11	5	10	23	471	19	NA	19	
167	Lorraine	37 14-Sep-44	7	US/GER	7	1	1000	0	0	3	2	0	32	19	16	0	35	8	0	0	0	0	NA	NA	NA	
168	Lorraine	45 14-Sep-44	0	US	8	1	1100	0	0	1	1	0	50	16	68	0	73	6	0	10	0	0	NA	33	33	
169	Lorraine	55 14-Sep-44	0	US	7	1	1400	0	0	1	5	0	17	15	86	17	73	18	5	10	0	118	168	NA	168	
170	Lorraine	26 15-Sep-44	0	US	7	1	2000	0	0	1	2	0	38	30	121	17	100	18	2	10	33	294	53	NA	53	
171	Lorraine	37 15-Sep-44	6	GER/US	7	2	1500	0	0	2	2	0	27	23	16	33	31	38	0	10	250	364	NA	NA	364	
172	Lorraine	45 15-Sep-44	6	GER/US	6	2	1200	0	0	2	2	0	9	22	28	0	21	8	0	0	0	NA	NA	NA	NA	
173	Lorraine	45 15-Sep-44	0	US	8	1	2000	0	0	2	8	0	27	14	0	0	21	4	0	0	0	NA	NA	103	NA	
174	Lorraine	55 15-Sep-44	0	US	6	1	3100	0	0	1	8	0	17	14	86	15	73	17	5	10	NA	NA	NA	NA	NA	
175	Lorraine	37 16-Sep-44	0	US	7	1	1700	0	0	2	2	0	49	33	66	16	98	17	0	10	15	500	NA	NA	500	
176	Lorraine	45 16-Sep-44	0	US	7	1	2800	0	0	3	0	0	45	29	57	16	70	19	0	0	0	NA	500	NA	500	

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NO.	OPERATION ID	DATE	ATTACK TYPE	ATTACK CODE	ATTACKER/DEFENDER CODE	ARTY	ENV E1	ENV LINE	ENV E2	ENV PEN	ENV E3	ENV E4	INF PLTN	INF US	ARMOR GER	ANTI-ARMOR US	MECZ CODE US	MECZ CODE GER	TANK ATTN US	TANK ATTN GER	PERS US	PERS GER
177	Lorraine	55 16-Sep-44	0 US	8	1 500	0	0	0	1	2	0	0	9	4	16	5	13	5	0	10	NA	NA
178	Lorraine	37 17-Sep-44	0 US	6	1 1600	0	0	0	1	2	0	0	80	58	67	8	109	25	0	10	0	NA
179	Lorraine	46 17-Sep-44	7 US/GER	7	1 1200	0	0	0	1	2	0	0	29	24	30	8	0	0	0	67	NA	7
180	Lorraine	55 17-Sep-44	0 US	8	1 1000	0	0	0	2	2	0	0	8	6	84	8	67	8	10	10	0	133
181	Lorraine	28 18-Sep-44	0 US	8	1 1700	0	0	0	1	2	0	0	52	17	77	12	88	15	1	8	65	417
182	Lorraine	37 18-Sep-44	0 US	6	1 1600	0	0	0	1	2	0	0	77	53	52	8	97	25	0	10	0	125
183	Lorraine	56 18-Sep-44	1 GER	5	2 1400	0	0	0	1	5	0	0	8	40	85	14	66	16	10	NA	NA	NA
184	Lorraine	39 19-Sep-44	0 US	6	1 1200	0	0	0	1	3	0	0	27	24	15	0	36	8	0	6	NA	NA
185	Lorraine	46 19-Sep-44	0 US	5	1 800	0	0	0	1	2	0	0	25	24	30	8	34	14	0	0	0	NA
186	Lorraine	57 19-Sep-44	1 GER	6	2 800	0	0	0	3	0	0	0	11	19	27	5	29	12	7	0	NA	23
187	Lorraine	58 19-Sep-44	6 GER/US	6	2 1800	0	0	0	1	0	0	0	19	28	80	37	59	33	5	10	100	514
188	Lorraine	29 20-Sep-44	0 US	7	1 1700	0	0	0	2	0	0	0	44	30	61	7	71	17	0	10	0	857
189	Lorraine	39 20-Sep-44	0 US	5	1 1400	0	0	0	2	2	0	0	76	38	47	9	93	20	0	8	21	NA
190	Lorraine	46 20-Sep-44	0 US	5	1 1000	0	0	0	1	2	0	0	25	14	30	5	34	12	0	0	34	NA
191	Lorraine	58 20-Sep-44	0 US	7	1 2100	0	0	0	3	0	0	0	7	14	62	15	52	14	10	10	113	167
192	Lorraine	29 21-Sep-44	1 GER	6	2 1400	0	0	0	1	0	0	0	43	26	66	1	71	13	0	10	15	999
193	Lorraine	46 22-Sep-44	0 US	8	1 800	0	0	0	1	2	0	0	26	13	30	0	34	8	0	0	0	NA
194	Lorraine	39 23-Sep-44	0 US	6	1 1000	0	0	0	1	5	0	0	35	13	31	0	55	6	0	10	NA	100
195	Lorraine	39 24-Sep-44	0 US	6	1 900	0	0	0	1	5	0	0	16	9	15	0	31	6	0	10	NA	NA
196	Lorraine	56 24-Sep-44	1 GER	6	2 1900	0	0	0	1	5	0	0	10	23	82	5	60	19	10	0	12	0
197	Lorraine	59 25-Sep-44	1 GER	6	2 1200	0	0	0	2	2	0	0	21	41	135	30	100	35	10	10	30	167
198	Lorraine	60 27-Sep-44	6 GER/US	6	2 1300	0	0	0	3	0	0	0	19	29	82	25	69	68	10	9	NA	480
199	Lorraine	60 28-Sep-44	6 GER/US	6	2 1400	0	0	0	2	0	0	0	22	26	64	38	56	47	9	10	NA	79
200	Lorraine	60 29-Sep-44	7 US/GER	8	1 1100	0	0	0	1	0	0	0	13	16	69	25	50	37	8	10	NA	NA
201	Lorraine	65 08-Nov-44	7 US/GER	6	1 4600	0	0	0	3	8	0	0	57	25	31	6	70	14	0	3	65	NA
202	Lorraine	66 08-Nov-44	0 US	6	1 2000	0	0	0	3	8	0	0	30	18	18	3	28	9	0	0	0	NA
203	Lorraine	75 09-Nov-44	0 US	6	1 2000	0	0	0	2	8	0	0	84	37	102	30	114	29	0	0	98	58
204	Lorraine	65 09-Nov-44	7 US/GER	7	1 1700	0	0	0	3	2	0	0	85	31	80	10	119	25	1	2	0	NA
205	Lorraine	75 09-Nov-44	0 US	6	1 800	0	0	0	3	2	0	0	41	28	127	10	105	15	3	0	197	800
206	Lorraine	76 09-Nov-44	0 US	6	1 700	0	0	0	1	3	0	0	58	37	40	5	62	12	0	3	173	200
207	Lorraine	85 09-Nov-44	7 US/GER	6	1 2200	0	0	0	2	5	0	0	83	60	105	10	110	31	0	0	67	NA
208	Lorraine	65 10-Nov-44	0 US	7	1 700	0	0	0	3	2	0	0	56	33	31	10	67	30	0	0	0	200
209	Lorraine	67 10-Nov-44	0 US	7	1 1500	0	0	0	1	5	0	0	32	5	46	3	55	3	1	10	44	267
210	Lorraine	76 10-Nov-44	0 US	6	1 800	0	0	0	1	3	0	0	57	25	37	5	59	19	0	0	0	NA
211	Lorraine	85 10-Nov-44	7 US/GER	6	1 3800	0	0	0	2	5	0	0	60	45	89	15	84	30	1	0	23	NA
212	Lorraine	75 10-Nov-44	7 US/GER	6	1 700	0	0	0	3	2	0	0	41	20	91	45	83	32	3	5	NA	31
213	Lorraine	65 11-Nov-44	0 US	7	1 1100	0	0	0	2	2	0	0	48	34	31	8	68	28	0	0	NA	750
214	Lorraine	67 11-Nov-44	0 US	8	1 900	0	0	0	2	5	0	0	29	3	35	1	53	1	1	10	29	545
215	Lorraine	75 11-Nov-44	6 GER/US	6	2 2200	0	0	0	1	2	0	0	40	53	91	30	82	31	3	10	33	267
216	Lorraine	85 11-Nov-44	0 US	6	1 2100	0	0	0	2	2	0	0	70	40	83	15	92	37	1	2	NA	267
217	Lorraine	67 12-Nov-44	0 US	6	1 1400	0	0	0	3	2	0	0	11	8	163	3	109	9	10	10	6	NA
218	Lorraine	75 12-Nov-44	0 US	8	1 1300	0	0	0	3	2	0	0	40	25	91	11	82	25	3	4	11	NA
219	Lorraine	85 12-Nov-44	7 US/GER	6	1 2600	0	0	0	1	2	0	0	91	59	136	19	128	44	1	5	NA	105
220	Lorraine	67 13-Nov-44	0 US	7	1 2000	0	0	0	3	2	0	0	36	18	162	2	141	9	3	3	19	NA

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NO.	OPERATION ID	DATE	ATTACK TYPE	ATTACK CODE	POSTURE	ATTACKER/DEFENDER CODE	ARTY	ENV E1	ENV LINE	ENV E2	ENV PEN E3	ENV INF E4	INF PLTN	INF GER	ARMOR US	ARMOR GER	ANTI-ARMOR US	ANTI-ARMOR GER	MECZ CODE	MECZ US	TANK ATTN	TANK GER	PERS ATTN	PERS US
221	Lorraine	75 13-Nov-44	0	US	6	1 2000	0	0	3	3	0	62	26	87	4	91	18	2	2	11	NA	110		
222	Lorraine	85 13-Nov-44	7	US/GER	5	1 3400	0	0	1	5	0	81	65	146	17	134	45	1	4	7	NA	NA		
223	Lorraine	67 14-Nov-44	7	US/GER	7	1 2000	0	0	1	2	0	9	10	65	2	53	10	0	0	NA	999	175		
224	Lorraine	75 14-Nov-44	0	US	6	1 4200	0	0	1	2	0	62	25	98	4	101	18	2	2	82	NA	45		
225	Lorraine	85 14-Nov-44	7	US/GER	7	1 3200	0	0	1	5	0	43	34	136	10	103	21	2	3	NA	529	NA		
226	Lorraine	75 15-Nov-44	0	US	7	1 2200	0	0	2	2	0	51	23	79	6	83	27	0	0	25	NA	NA		
227	Lorraine	67 16-Nov-44	0	US	7	1 1700	0	0	1	2	0	60	49	177	28	174	35	2	1	NA	107	NA		
228	Lorraine	75 18-Nov-44	0	US	7	1 1200	0	0	3	2	0	79	19	101	6	108	12	0	0	NA	NA	12		
229	Lorraine	85 18-Nov-44	0	US	5	1 3400	0	0	1	5	0	52	45	52	8	67	36	0	6	38	NA	10		
230	Lorraine	75 19-Nov-44	0	US	6	1 1300	0	0	3	3	0	61	40	138	33	117	36	1	10	7	NA	64		
231	Lorraine	85 19-Nov-44	0	US	6	1 2600	0	0	2	2	0	52	44	52	8	67	36	0	6	77	NA	NA		
232	Lorraine	75 20-Nov-44	0	US	6	1 2300	0	0	1	2	0	61	35	145	33	123	36	1	10	NA	NA	49		
233	Lorraine	85 20-Nov-44	0	US	7	1 2300	0	0	2	2	0	72	27	37	8	67	21	0	0	NA	NA	63		
234	Lorraine	75 21-Nov-44	0	US	5	1 2200	0	0	2	8	0	63	50	107	33	109	42	2	10	NA	NA	NA		
235	Lorraine	85 21-Nov-44	0	US	5	1 1600	0	0	2	2	0	62	16	37	8	64	21	0	0	81	NA	NA	47	
236	Lorraine	75 22-Nov-44	7	US/GER	6	1 2000	0	0	2	8	0	52	43	91	33	85	36	0	10	22	152	NA		
237	Lorraine	85 22-Nov-44	6	GER/US	6	2 700	0	0	1	5	0	21	33	11	22	20	37	0	5	NA	NA	44		
238	Lorraine	75 23-Nov-44	7	US/GER	6	1 1800	0	0	3	2	0	56	28	13	28	45	26	1	10	NA	36	51		
239	Lorraine	85 23-Nov-44	7	US/GER	5	1 1400	0	0	2	3	0	62	32	37	22	64	37	0	6	NA	NA	72		
240	Lorraine	75 24-Nov-44	0	US	6	1 1400	0	0	3	8	0	62	28	181	20	145	21	0	10	17	NA	51		
241	Lorraine	85 24-Nov-44	7	US/GER	5	1 1300	0	0	2	2	0	49	29	35	20	60	36	0	6	NA	100	NA		
242	Lorraine	95 24-Nov-44	0	US	7	1 500	0	0	2	1	0	10	23	80	4	57	13	10	8	NA	500	NA		
243	Lorraine	68 25-Nov-44	0	US	6	1 3700	0	0	1	5	0	82	17	105	21	130	23	0	0	19	NA	54		
244	Lorraine	85 25-Nov-44	7	US/GER	6	1 1200	0	0	2	2	0	32	34	17	16	34	33	0	7	345	NA	26		
245	Lorraine	95 25-Nov-44	1	GER	6	2 1300	0	0	2	2	0	16	23	80	14	64	26	10	10	NA	NA	NA		
246	Lorraine	68 26-Nov-44	0	US	5	1 2400	0	0	1	2	0	80	36	100	21	107	30	0	0	NA	NA	85		
247	Lorraine	85 26-Nov-44	0	US	5	1 1000	0	0	2	3	0	32	34	17	16	34	33	0	7	NA	NA	45		
248	Lorraine	95 26-Nov-44	0	US	8	1 1200	0	0	2	2	0	16	11	80	7	64	13	10	10	NA	NA	NA		
249	Lorraine	96 26-Nov-44	0	US	8	1 300	0	0	2	2	0	13	7	82	6	62	7	10	10	NA	NA	NA		
250	Lorraine	95 27-Nov-44	0	US	5	1 1500	0	0	2	2	0	15	9	80	4	63	9	10	10	NA	NA	NA		

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RMC

NO.	OPERATION	PERS ATTN GER	ADV DIST (KM)	FRONT AGE (KM)
1	Ardennes	NA	0.0	10
2	Ardennes	NA	1.0	7
3	Ardennes	81	1.0	4
4	Ardennes	NA	6.0	5
5	Ardennes	9	5.0	5
6	Ardennes	64	2.0	11
7	Ardennes	76	2.0	6
8	Ardennes	NA	2.5	10
9	Ardennes	91	4.5	6
10	Ardennes	79	4.5	5
11	Ardennes	NA	2.1	8
12	Ardennes	NA	1.5	8
13	Ardennes	NA	1.0	6
14	Ardennes	145	2.0	14
15	Ardennes	NA	0.0	10
16	Ardennes	NA	7.0	4
17	Ardennes	NA	27.0	8
18	Ardennes	NA	4.0	12
19	Ardennes	NA	5.0	6
20	Ardennes	NA	9.5	3
21	Ardennes	50	3.0	6
22	Ardennes	32	5.0	5
23	Ardennes	NA	4.2	8
24	Ardennes	107	0.6	8
25	Ardennes	NA	4.0	6
26	Ardennes	NA	2.0	14
27	Ardennes	NA	0.0	10
28	Ardennes	NA	3.0	8
29	Ardennes	NA	9.0	5
30	Ardennes	NA	1.0	3
31	Ardennes	NA	1.0	6
32	Ardennes	NA	1.0	9
33	Ardennes	NA	12.0	4
34	Ardennes	NA	17.0	7
35	Ardennes	NA	15.0	5
36	Ardennes	131	5.0	10
37	Ardennes	NA	0.5	11
38	Ardennes	NA	1.0	14
39	Ardennes	NA	0.0	5
40	Ardennes	NA	0.0	7
41	Ardennes	NA	3.5	3
42	Ardennes	NA	0.0	10
43	Ardennes	NA	0.0	6
44	Ardennes	NA	2.5	9

RMC

NO.	OPERATION	PERS ATTN GER (KM)	ADV DIST (KM)	FRONT AGE (KM)
45	Ardennes	NA	18.0	5
46	Ardennes	NA	1.0	6
47	Ardennes	121	5.5	4
48	Ardennes	NA	2.2	5
49	Ardennes	NA	7.0	9
50	Ardennes	NA	0.2	14
51	Ardennes	NA	0.0	5
52	Ardennes	45	0.0	7
53	Ardennes	NA	1.0	6
54	Ardennes	NA	2.0	9
55	Ardennes	NA	0.0	7
56	Ardennes	NA	0.0	5
57	Ardennes	NA	1.5	9
58	Ardennes	NA	15.0	6
59	Ardennes	NA	2.3	6
60	Ardennes	110	1.7	6
61	Ardennes	NA	1.0	9
62	Ardennes	NA	0.5	11
63	Ardennes	194	0.0	14
64	Ardennes	NA	0.0	5
65	Ardennes	NA	0.0	7
66	Ardennes	NA	1.0	8
67	Ardennes	NA	2.0	8
68	Ardennes	63	0.0	12
69	Ardennes	NA	3.0	4
70	Ardennes	NA	0.0	9
71	Ardennes	NA	0.0	8
72	Ardennes	NA	12.0	4
73	Ardennes	NA	0.0	6
74	Ardennes	NA	1.0	9
75	Ardennes	NA	1.0	14
76	Ardennes	NA	1.0	5
77	Ardennes	214	1.5	5
78	Ardennes	NA	0.4	4
79	Ardennes	NA	1.0	9
80	Ardennes	NA	0.0	20
81	Ardennes	NA	20.0	9
82	Ardennes	NA	2.0	4
83	Ardennes	NA	3.0	9
84	Ardennes	192	0.0	17
85	Ardennes	NA	1.5	4
86	Ardennes	NA	0.8	3
87	Ardennes	NA	4.5	6
88	Ardennes	NA	12.0	7

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RMC

NO.	OPERATION	PERS ATTN GER	ADV DIST (KM)	FRONT AGE (KM)
89	Ardennes	342	16.0	7
90	Ardennes	NA	1.6	3
91	Ardennes	NA	2.3	2
92	Ardennes	NA	4.5	3
93	Ardennes	NA	2.7	12
94	Ardennes	111	7.0	9
95	Ardennes	NA	2.0	3
96	Ardennes	NA	4.5	6
97	Ardennes	110	0.0	9
98	Ardennes	NA	1.0	5
99	Ardennes	NA	9.0	9
100	Ardennes	NA	7.0	6
101	Ardennes	NA	1.5	3
102	Ardennes	NA	1.3	3
103	Ardennes	NA	0.0	9
104	Ardennes	NA	1.5	14
105	Ardennes	NA	1.0	4
106	Ardennes	NA	1.0	4
107	Ardennes	81	2.0	9
108	Ardennes	NA	1.0	5
109	Ardennes	NA	2.0	3
110	Ardennes	NA	4.0	8
111	Ardennes	NA	4.2	3
112	Ardennes	NA	2.1	3
113	Ardennes	NA	1.8	5
114	Ardennes	NA	1.0	12
115	Ardennes	NA	0.0	9
116	Ardennes	NA	2.0	14
117	Ardennes	NA	0.0	4
118	Ardennes	NA	1.5	4
119	Ardennes	NA	1.0	5
120	Ardennes	NA	0.0	9
121	Ardennes	NA	3.0	3
122	Ardennes	NA	8.2	3
123	Ardennes	NA	2.3	3
124	Ardennes	NA	1.6	4
125	Ardennes	NA	1.5	9
126	Ardennes	NA	1.9	14
127	Ardennes	NA	2.0	4
128	Ardennes	NA	2.0	5
129	Ardennes	NA	6.0	5
130	Ardennes	NA	3.3	2
131	Ardennes	NA	2.5	4
132	Ardennes	NA	1.6	10

RMC

NO.	OPERATION	PERS ATTN GER (KM)	ADV DIST (KM)	FRONT AGE (KM)
133	Ardennes	NA	1.1	14
134	Ardennes	NA	1.0	6
135	Ardennes	NA	2.3	4
136	Ardennes	NA	2.0	10
137	Ardennes	NA	0.0	6
138	Ardennes	85	1.2	8
139	Ardennes	NA	0.5	9
140	Ardennes	NA	4.0	12
141	Ardennes	NA	1.0	4
142	Ardennes	125	0.0	9
143	Ardennes	NA	1.5	6
144	Ardennes	239	1.0	4
145	Ardennes	NA	0.0	15
146	Ardennes	NA	0.0	9
147	Ardennes	NA	2.5	5
148	Ardennes	NA	0.5	15
149	Ardennes	NA	1.0	5
150	Ardennes	NA	0.5	11
151	Lorraine	NA	0.0	12
152	Lorraine	NA	0.5	2
153	Lorraine	NA	0.0	1
154	Lorraine	NA	0.0	1
155	Lorraine	NA	2.0	2
156	Lorraine	NA	4.5	10
157	Lorraine	NA	0.0	4
158	Lorraine	NA	1.3	4
159	Lorraine	NA	1.5	3
160	Lorraine	NA	0.0	4
161	Lorraine	NA	2.2	6
162	Lorraine	NA	1.5	4
163	Lorraine	NA	26.5	3
164	Lorraine	NA	0.0	8
165	Lorraine	NA	4.2	8
166	Lorraine	NA	6.0	3
167	Lorraine	NA	1.5	5
168	Lorraine	NA	3.7	12
169	Lorraine	NA	5.0	9
170	Lorraine	NA	0.5	5
171	Lorraine	NA	1.0	4
172	Lorraine	NA	0.0	2
173	Lorraine	NA	0.7	6
174	Lorraine	NA	0.0	3
175	Lorraine	NA	0.0	5
176	Lorraine	NA	5.5	14

RMC

NO.	OPERATION	PERS ATTN	ADV DIST	FRONT AGE
		GER (KM)	(KM)	(KM)
177	Lorraine	NA	6.2	2
178	Lorraine	NA	3.3	13
179	Lorraine	NA	3.2	3
180	Lorraine	NA	6.0	3
181	Lorraine	NA	3.5	6
182	Lorraine	NA	1.0	16
183	Lorraine	NA	1.0	9
184	Lorraine	NA	1.5	3
185	Lorraine	NA	1.3	5
186	Lorraine	NA	0.0	4
187	Lorraine	NA	0.0	6
188	Lorraine	NA	2.5	8
189	Lorraine	NA	1.0	16
190	Lorraine	NA	1.5	5
191	Lorraine	NA	3.0	2
192	Lorraine	NA	0.0	8
193	Lorraine	NA	2.3	6
194	Lorraine	NA	4.2	3
195	Lorraine	NA	0.0	3
196	Lorraine	NA	0.0	5
197	Lorraine	NA	0.0	16
198	Lorraine	NA	0.5	8
199	Lorraine	NA	0.5	5
200	Lorraine	NA	1.0	3
201	Lorraine	NA	2.0	9
202	Lorraine	NA	1.3	5
203	Lorraine	NA	1.0	14
204	Lorraine	NA	4.5	14
205	Lorraine	NA	7.0	5
206	Lorraine	NA	1.0	6
207	Lorraine	NA	3.0	6
208	Lorraine	NA	3.0	9
209	Lorraine	NA	5.0	5
210	Lorraine	NA	1.0	7
211	Lorraine	NA	3.0	8
212	Lorraine	NA	0.3	5
213	Lorraine	NA	5.3	10
214	Lorraine	NA	9.0	2
215	Lorraine	NA	2.2	5
216	Lorraine	NA	1.0	12
217	Lorraine	NA	1.0	7
218	Lorraine	NA	5.0	9
219	Lorraine	NA	3.0	18
220	Lorraine	NA	3.0	11

RMC

NO.	OPERATION	PERS ATTN	ADV GER (KM)	DIST (KM)	FRONT AGE
221	Lorraine	NA	5.0	7	7
222	Lorraine	NA	0.1	18	18
223	Lorraine	NA	4.5	3	3
224	Lorraine	NA	1.5	6	6
225	Lorraine	NA	2.0	10	10
226	Lorraine	NA	2.5	6	6
227	Lorraine	NA	3.0	9	9
228	Lorraine	NA	3.0	8	8
229	Lorraine	NA	3.5	7	7
230	Lorraine	NA	3.0	6	6
231	Lorraine	NA	1.0	8	8
232	Lorraine	NA	3.0	8	8
233	Lorraine	NA	5.0	15	15
234	Lorraine	NA	2.2	8	8
235	Lorraine	NA	1.0	9	9
236	Lorraine	NA	3.2	11	11
237	Lorraine	NA	2.0	4	4
238	Lorraine	NA	1.0	11	11
239	Lorraine	NA	1.0	12	12
240	Lorraine	NA	0.5	13	13
241	Lorraine	NA	2.0	10	10
242	Lorraine	NA	0.0	3	3
243	Lorraine	NA	3.0	14	14
244	Lorraine	NA	2.0	11	11
245	Lorraine	NA	0.0	3	3
246	Lorraine	NA	1.3	18	18
247	Lorraine	NA	0.2	11	11
248	Lorraine	NA	2.0	3	3
249	Lorraine	NA	4.0	5	5
250	Lorraine	NA	0.5	5	5

ROWLAND

1. Data Source:

- a. Title: The Pace of Operations: Maximum Rates of Advance
- b. Author: Rowland, David, and David Watson
- c. Date: April 1988
- d. Organization: Defense Operational Analysis Establishment (UK)
- e. Number: DOAE Working Paper 670/7
- f. Available From: Defense Operational Analysis Establishment

2. Data Description:

- a. The source's aim is define the upper limits of advance rate for unopposed movement. In support of this aim it provides data on a wide variety of operations including several from the 19th Century, the Boer War, WWII, the Falklands War of 1982, and others too numerous to name.
- b. The source does not indicate where it obtained its information.
- c. Environmental and operational factors such as how the distances and elapsed times are defined, what weather, terrain, and degree of enemy resistance are not usually specified. However, presumably enemy resistance was slight to negligible.

3. Discussion and Comments: As indicated by its title, the source considers only advances by forces that are lightly engaged. The source is a preliminary or working paper, so its findings may be modified in the final version. But it contains a wealth of data not readily available from any other source.

4. Data Table Notes:

- a. Note 1: The advances of May 16th and May 17th were, in fact, one single advance ending at 0515 on the latter date, some 70.4 miles (113.30 km) having been covered in about 19 1/4 hours, for a rate of advance of about 141.26 km/day.
- b. Note 2: Lidell Hart, in "The Rommel Papers," remarks that the advance of 17 June "far exceeded any day's advance which had ever been made in warfare."
- c. Note 3: Harriet Fast Scott disputes Soviet claims as to (1) intensity of opposition, (2) distance displaced, (3) size of force displaced. She speculates that Soviet motives were to claim as much territory as possible in preparation for postwar negotiations.
- d. Note 4: To Camilla Creek House. The time 0700 is based on the map in MG John Frost, "2 Para, Falklands," and perhaps represents the time at which the *whole* battalion arrived. Some elements reached Camilla Creek House earlier. Max Hastings, in "The Battle for the Falklands," says that the "red torch signal" signifying D-Company's arrival was seen at 0300, and the RMO, Captain Hughes talks in Max Arthur's "Above All, Courage," of a march of "six hours and fourteen kilometers."
- e. Note 5: It seems that both 45 Commando and 3 Para set out with the men carrying about 120 pounds each. After the first two-days' march, the Commandos switched to "heavy fighting order," which seems to have ranged from about 76 to 83 pounds. Martin Middlebrook in his "Operation Corporate" says that the Paras in general carried lighter weights than the Marines (presumably similar to the "heavy

fighting order"). Captain J. H. McManners RA, in a March 1983 letter in the RUSI Journal, makes a distinction between Marine "yomping"—"a rather onomatopoeic word—used when distances have to be covered and all resources have to be carried by the individual on his own back," and "tabbing"—which is short for "tactical advance for battle."

f. Note 6: Landing near Depienne, Tunisia, on 29 November, the Bn advanced toward Oudna, becoming involved in heavy fighting over the next 2 days. On 1 December, having suffered heavy casualties and still pursued by the Germans, the paratroopers retreated, reaching Medjez el Bab on 3 December.

ROWLAND

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'M INTENS
1	Winchester Campaign	Jackson, via Front Royal	24.0	38.62	1	38.62	23-May-1862	23-May-1862	None
2	Winchester Campaign	to Winchester	17.4	28.00	1	28.00	24-May-1862	24-May-1862	None
3	Winchester Campaign	Victory at Winchester	5.0	8.05	1	8.05	25-May-1862	25-May-1862	HVY
4	Winchester Campaign	at Winchester	0.0	0.00	2	0.00	26-May-1862	27-May-1862	None
5	Winchester Campaign	return to Charles Town	16.8	27.04	1	27.04	28-May-1862	28-May-1862	None
6	Winchester Campaign	return to Winchester	21.8	35.08	1	35.08	29-May-1862	29-May-1862	None
7	Winchester Campaign	at Winchester	0.0	0.00	1	0.00	30-May-1862	30-May-1862	None
8	Winchester Campaign	to Strasburg	14.5	23.34	1	23.34	31-May-1862	31-May-1862	None
9	Winchester Campaign	to Woodstock	8.7	14.00	1	14.00	1-Jun-1862	1-Jun-1862	None
10	Winchester Campaign	to Mount Jackson	13.1	21.08	2	10.54	2-Jun-1862	3-Jun-1862	None
11	Winchester Campaign	to Cross Keys	29.1	46.83	2	23.42	4-Jun-1862	5-Jun-1862	None
12	Winchester Campaign	Total	150.7	242.05	14	17.29	23-May-1862	5-Jun-1862	None
13	Second Bull Run	Jackson, Brandy Station to Salem	28.3	45.54	1	45.54	25-Aug-1862	25-Aug-1862	None
14	Second Bull Run	to Bristoe Station	27.7	44.58	1	44.58	26-Aug-1862	26-Aug-1862	None
15	Second Bull Run	Total	56.0	90.12	2	45.06	25-Aug-1862	26-Aug-1862	None
16	Vicksburg Campaign	Grierson, Grand Junction to Yalabusha River	84.6	136.15	4	34.04	17-Apr-1863	20-Apr-1863	None
17	Vicksburg Campaign	to Jackson-Meridian Railroad	107.7	173.33	4	43.33	21-Apr-1863	24-Apr-1863	None
18	Vicksburg Campaign	to Mississippi Central Railroad	92.3	148.54	3	49.51	25-Apr-1863	27-Apr-1863	None
19	Vicksburg Campaign	to Baton Rouge	123.1	198.11	5	39.62	28-Apr-1863	2-May-1863	None
20	Vicksburg Campaign	Total	407.7	656.13	16	41.01	17-Apr-1863	2-May-1863	None
21	Wilderness Campaign	Sheridan, towards North Anna River	27.1	43.61	1	43.61	9-May-1864	9-May-1864	None
22	Wilderness Campaign	to South Anna River	18.1	29.13	1	29.13	10-May-1864	10-May-1864	None
23	Wilderness Campaign	to South-East Mechanicsville	23.2	37.34	1	37.34	11-May-1864	11-May-1864	None
24	Wilderness Campaign	to Haxall's Landing	19.9	32.03	1	32.03	12-May-1864	12-May-1864	None
25	Wilderness Campaign	Total	88.3	142.11	4	35.53	9-May-1864	12-May-1864	None
26	Washington Raid	Early, Winchester to Marlinsburg	22.4	36.05	1	36.05	3-Jul-1864	3-Jul-1864	None
27	Washington Raid	to Harper's Ferry	14.9	23.98	1	23.98	4-Jul-1864	4-Jul-1864	None
28	Washington Raid	to Sharpsburg	9.6	15.45	1	15.45	5-Jul-1864	5-Jul-1864	None
29	Washington Raid	at Sharpsburg	0.0	0.00	2	0.00	6-Jul-1864	7-Jul-1864	None
30	Washington Raid	to Catoclin Mountain	14.9	23.98	1	23.98	8-Jul-1864	8-Jul-1864	HVY
31	Washington Raid	to Monocacy	1.7	18.83	1	18.83	9-Jul-1864	9-Jul-1864	None
32	Washington Raid	to Rockville	21.3	34.28	1	34.28	10-Jul-1864	10-Jul-1864	None
33	Washington Raid	to Fort Stevens	11.7	18.83	1	18.83	11-Jul-1864	11-Jul-1864	None
34	Washington Raid	Fighting around Fort Stevens	0.0	0.00	1	0.00	12-Jul-1864	12-Jul-1864	HVY
35	Washington Raid	to White's Ford	29.9	48.12	1	48.12	13-Jul-1864	13-Jul-1864	None
36	Washington Raid	to Leesburg (cross Potomac River)	4.3	6.92	1	6.92	14-Jul-1864	14-Jul-1864	None
37	Washington Raid	Total	140.7	226.43	12	18.87	3-Jul-1864	14-Jul-1864	None
38	Boer War	French, from Randam across River Riet	12.8	20.60	1	20.60	11-Feb-00	11-Feb-00	None
39	Boer War	to the River Modder	25.6	41.20	1	41.20	12-Feb-00	12-Feb-00	None
40	Boer War	Waiting for baggage on River Modder	0.0	0.00	1	0.00	13-Feb-00	13-Feb-00	None
41	Boer War	to Kimberly	19.6	31.54	1	31.54	14-Feb-00	14-Feb-00	Med
42	Boer War	Pursuing Boers North of Kimberly	24.3	39.11	1	39.11	15-Feb-00	15-Feb-00	None
43	Boer War	towards Vendulie Drift, River Modder	29.6	47.64	1	47.64	16-Feb-00	16-Feb-00	None
44	Boer War	Total	111.9	180.09	6	30.01	11-Feb-00	16-Feb-00	None
45	Schlieffen Plan	Ger II Corps, 1st Army, to Veerle	18.2	29.29	1	29.29	18-Aug-14	18-Aug-14	Med

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)(DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	P/N	ITEMS
46	Schlieffen Plan	to River Dyle	12.1	19.47	1	19.47	19-Aug-14	19-Aug-14	Med	
47	Schlieffen Plan	to Vivorde	10.9	17.54	1	17.54	20-Aug-14	20-Aug-14	Med	
48	Schlieffen Plan	to West of Brussels	8.5	13.68	1	13.68	21-Aug-14	21-Aug-14	Med	
49	Schlieffen Plan	to Minove	13.3	21.40	1	21.40	22-Aug-14	22-Aug-14	Med	
50	Schlieffen Plan	to La Hamaiade	19.1	30.74	1	30.74	23-Aug-14	23-Aug-14	Med	
51	Schlieffen Plan	to Conde	22.7	36.53	1	36.53	24-Aug-14	24-Aug-14	Med	
52	Schlieffen Plan	to Bouchain	17.2	27.68	1	27.68	25-Aug-14	25-Aug-14	Med	
53	Schlieffen Plan	to Hermies	19.2	30.90	1	30.90	26-Aug-14	26-Aug-14	Med	
54	Schlieffen Plan	to East of Combles	12.4	19.96	1	19.96	27-Aug-14	27-Aug-14	Med	
55	Schlieffen Plan	to River Somme	8.1	13.04	1	13.04	28-Aug-14	28-Aug-14	Med	
56	Schlieffen Plan	to Proyard	6.0	9.66	1	9.66	29-Aug-14	29-Aug-14	Med	
57	Schlieffen Plan	to Moreuil	16.3	26.15	1	26.15	30-Aug-14	30-Aug-14	Med	
58	Schlieffen Plan	to Maignelay	16.7	26.88	1	26.88	31-Aug-14	31-Aug-14	Med	
59	Schlieffen Plan	to Verbiere	19.6	31.54	1	31.54	01-Sep-14	01-Sep-14	Med	
60	Schlieffen Plan	to Senlis	10.5	16.90	1	16.90	02-Sep-14	02-Sep-14	Med	
61	Schlieffen Plan	to Mateuil	11.5	18.51	1	18.51	03-Sep-14	03-Sep-14	Med	
62	Schlieffen Plan	to River Marne	17.2	27.68	1	27.68	04-Sep-14	04-Sep-14	Med	
63	Schlieffen Plan	to Coulommiers	13.9	22.37	1	22.37	05-Sep-14	05-Sep-14	Med	
64	Schlieffen Plan	Total	273.4	439.91	19	23.15	18-Aug-14	05-Sep-14	Med	
65	Cavalry at Gaza	Brit 5th Cav Division(-) to Acre	65.0	104.61	5	20.92	19-Sep-18	23-Sep-18	NA	
66	Cavalry at Gaza	Elements 5th Cavalry Division	54.5	87.71	5	17.54	19-Sep-18	23-Sep-18	NA	
67	Cavalry at Gaza	4th Cavalry Division to River Jordan	56.5	90.93	5	18.19	19-Sep-18	23-Sep-18	NA	
68	Cavalry at Gaza	Australian Cavalry Division(-) to Samakh	78.3	126.01	7	18.00	19-Sep-18	25-Sep-18	NA	
69	Cavalry at Gaza	Elem. Aust. Cav Div towards Mazarath	76.5	123.11	6	20.52	19-Sep-18	24-Sep-18	NA	
70	Battle of France	Ger XXXVIII Korps, near Somme to Poix	20.0	32.19	3	10.73	05-Jun-40	07-Jun-40	Lite	
71	Battle of France	to near Gournay	23.3	37.50	1	37.50	08-Jun-40	08-Jun-40	Lite	
72	Battle of France	across Seine River	45.0	72.42	2	36.21	09-Jun-40	10-Jun-40	Lite	
73	Battle of France	halted	0.0	0.00	2	0.00	11-Jun-40	12-Jun-40	Lite	
74	Battle of France	Sennonches	50.0	80.47	4	20.12	13-Jun-40	16-Jun-40	Lite	
75	Battle of France	to Le Mans	53.3	85.78	2	42.89	17-Jun-40	18-Jun-40	Lite	
76	Battle of France	to Chalons	76.7	123.44	4	30.86	19-Jun-40	22-Jun-40	Lite	
77	Battle of France	Total	268.3	431.79	18	23.99	05-Jun-40	22-Jun-40	Lite	
78	Battle of Flanders	Ger 2nd Panzer Div, to Stainchamps	20.9	33.64	1	33.64	10-May-40	10-May-40	Lite	
79	Battle of Flanders	to Libramont	22.6	36.37	1	36.37	11-May-40	11-May-40	Lite	
80	Battle of Flanders	to Flanders	13.9	22.37	1	22.37	12-May-40	12-May-40	Lite	
81	Battle of Flanders	to Donchery	22.5	36.21	1	36.21	13-May-40	13-May-40	Lite	
82	Battle of Flanders	to Sapoyne	8.2	13.20	1	13.20	14-May-40	14-May-40	Lite	
83	Battle of Flanders	to West of Poix-Terron	13.3	21.40	1	21.40	15-May-40	15-May-40	Lite	
84	Battle of Flanders	towards River Oise	53.8	86.58	1	86.58	16-May-40	16-May-40	Lite	
85	Battle of Flanders	to Oise-Sambre Canal	13.8	22.21	1	22.21	17-May-40	17-May-40	Lite	
86	Battle of Flanders	to Canal du Nord	32.0	51.50	1	51.50	18-May-40	18-May-40	Lite	
87	Battle of Flanders	halted	0.0	0.00	1	0.00	19-May-40	19-May-40	Lite	
88	Battle of Flanders	to Noyelles (coast)	64.0	103.00	1	103.00	20-May-40	20-May-40	Lite	
89	Battle of Flanders	Total	265.0	426.48	11	38.77	10-May-40	20-May-40	Lite	
90	Battle of Flanders	Ger 1st Panzer Div, to Witry	33.4	53.75	1	53.75	10-May-40	10-May-40	Lite	

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPPN INTENS
91	Battle of Flanders	to Bouillon	20.9	33.64	1	1	33.64	11-May-40	11-May-40	Lite
92	Battle of Flanders	to Sedan	13.9	22.37	1	1	22.37	12-May-40	12-May-40	Lite
93	Battle of Flanders	to Marfee Woods	7.3	11.75	1	1	11.75	13-May-40	13-May-40	Lite
94	Battle of Flanders	to Singly	16.5	26.55	1	1	26.55	14-May-40	14-May-40	Lite
95	Battle of Flanders	to Bouvellemant	8.2	13.20	1	1	13.20	15-May-40	15-May-40	Lite
96	Battle of Flanders	to Marle	51.0	82.08	1	1	82.08	16-May-40	16-May-40	Lite
97	Battle of Flanders	to Ribemont	27.6	44.42	1	1	44.42	17-May-40	17-May-40	Lite
98	Battle of Flanders	to Peronne	27.6	44.42	1	1	44.42	18-May-40	18-May-40	Lite
99	Battle of Flanders	halted	0.0	0.00	1	1	0.00	19-May-40	19-May-40	Lite
100	Battle of Flanders	to South of Amiens	25.6	41.20	1	1	41.20	20-May-40	20-May-40	Lite
101	Battle of Flanders	Total	232.0	373.37	11	11	33.94	10-May-40	20-May-40	Lite
102	Battle of Flanders	Ger 10th Panzer Div, to Estalle	30.6	49.25	1	1	49.25	10-May-40	10-May-40	Lite
103	Battle of Flanders	to Rossignol	13.9	22.37	1	1	22.37	11-May-40	11-May-40	Lite
104	Battle of Flanders	to Sedan	27.8	44.74	1	1	44.74	12-May-40	12-May-40	Lite
105	Battle of Flanders	toward Marfee Woods	3.7	5.95	1	1	5.95	13-May-40	13-May-40	Lite
106	Battle of Flanders	to Roucourt et Flabas	10.1	16.25	1	1	16.25	14-May-40	14-May-40	Lite
107	Battle of Flanders	to La Besone	3.7	5.95	1	1	5.95	15-May-40	15-May-40	Lite
108	Battle of Flanders	halted	0.0	0.00	1	1	0.00	16-May-40	16-May-40	Lite
109	Battle of Flanders	to North of Rethel	27.6	44.42	1	1	44.42	17-May-40	17-May-40	Lite
110	Battle of Flanders	to Oise-Sambre Canal	40.0	64.37	1	1	64.37	18-May-40	18-May-40	Lite
111	Battle of Flanders	to Ham	17.8	28.65	1	1	28.65	19-May-40	19-May-40	Lite
112	Battle of Flanders	to Peronne	14.2	22.85	1	1	22.85	20-May-40	20-May-40	Lite
113	Battle of Flanders	Total	189.4	304.81	11	11	27.71	10-May-40	20-May-40	Lite
114	Battle of France	Ger 1st Panzer Div, towards La Neuville	14.0	22.53	1	1	22.53	10-Jun-40	10-Jun-40	Lite
115	Battle of France	over River Suippes	21.0	33.80	1	1	33.80	11-Jun-40	11-Jun-40	Lite
116	Battle of France	to Suippes	14.0	22.53	1	1	22.53	12-Jun-40	12-Jun-40	Lite
117	Battle of France	over Rhine-Marne Canal	42.1	67.75	1	1	67.75	13-Jun-40	13-Jun-40	Lite
118	Battle of France	to Chaumont	56.1	90.28	1	1	90.28	14-Jun-40	14-Jun-40	Lite
119	Battle of France	to Gray sur Saone	56.1	90.28	1	1	90.28	15-Jun-40	15-Jun-40	Lite
120	Battle of France	to Besancon	45.0	72.42	1	1	72.42	16-Jun-40	16-Jun-40	Lite
121	Battle of France	to Montbeliard	47.7	76.77	1	1	76.77	17-Jun-40	17-Jun-40	Lite
122	Battle of France	to Belfort	16.4	26.39	1	1	26.39	18-Jun-40	18-Jun-40	Lite
123	Battle of France	to Welscher Belchen	23.2	37.34	1	1	37.34	19-Jun-40	19-Jun-40	Lite
124	Battle of France	to Gerardmer	16.4	26.39	1	1	26.39	20-Jun-40	20-Jun-40	Lite
125	Battle of France	Total	352.0	566.49	11	11	51.50	10-Jun-40	20-Jun-40	Lite
126	Battle of France	Ger 29th Motorized Div, uncommitted	NA	NA	NA	NA	NA	10-Jun-40	10-Jun-40	Lite
127	Battle of France	uncommitted	NA	NA	NA	NA	NA	11-Jun-40	11-Jun-40	Lite
128	Battle of France	towards SE from Marmelon-Le-Grand	16.8	27.04	1	1	27.04	12-Jun-40	12-Jun-40	Lite
129	Battle of France	to Rhine-Marne Canal	21.0	33.80	1	1	33.80	13-Jun-40	13-Jun-40	Lite
130	Battle of France	over Rhine-Marne Canal	14.0	22.53	1	1	22.53	14-Jun-40	14-Jun-40	Lite
131	Battle of France	to SW of Langres	81.8	131.64	1	1	131.64	15-Jun-40	15-Jun-40	Lite
132	Battle of France	to Pontallier-su-Saone	16.4	26.39	1	1	26.39	16-Jun-40	16-Jun-40	Lite
133	Battle of France	to Pontarlier	61.4	98.81	1	1	98.81	17-Jun-40	17-Jun-40	Lite
134	Battle of France	over the Jura River	27.3	43.94	1	1	43.94	18-Jun-40	18-Jun-40	Lite
135	Battle of France	towards Belfort	27.3	43.94	1	1	43.94	19-Jun-40	19-Jun-40	Lite

ROWLAND

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136	Battle of France	to Belfort	16.4	26.39	1	1	26.39	20-Jun-40	20-Jun-40	Lite
137	Battle of France	Total	282.4	454.48	9	9	50.50	10-Jun-40	20-Jun-40	Lite
138	Battle of France	Ger 2nd Panzer Div, towards River Suippes	12.6	20.28	1	1	20.28	10-Jun-40	10-Jun-40	Lite
139	Battle of France	over River Suippes	14.0	22.53	1	1	22.53	11-Jun-40	11-Jun-40	Lite
140	Battle of France	to SE of Chalons-sur-Marne	21.0	33.80	1	1	33.80	12-Jun-40	12-Jun-40	Lite
141	Battle of France	to Rhine-Marne Canal	16.8	27.04	1	1	27.04	13-Jun-40	13-Jun-40	Lite
142	Battle of France	over Rhine-Marne Canal	21.0	33.80	1	1	33.80	14-Jun-40	14-Jun-40	Lite
143	Battle of France	to NE of Dijon	71.2	114.59	1	1	114.59	15-Jun-40	15-Jun-40	Lite
144	Battle of France	to Auxonne	42.1	67.75	1	1	67.75	16-Jun-40	16-Jun-40	Lite
145	Battle of France	to Remiremont	91.3	146.93	2	2	73.47	17-Jun-40	18-Jun-40	Lite
146	Battle of France	taking Fort Rupt	0.0	0.00	1	1	0.00	19-Jun-40	19-Jun-40	Hvy
147	Battle of France	to Le Tholy	4.1	6.60	1	1	6.60	20-Jun-40	20-Jun-40	Lite
148	Battle of France	Total	294.1	473.31	11	11	43.03	10-Jun-40	20-Jun-40	Lite
149	Battle of Flanders	Rommel's 7th Panzer Div, to Chabrehez	12.0	19.31	1	1	19.31	10-May-40	10-May-40	Lite
150	Battle of Flanders	to Marche	23.9	38.46	1	1	38.46	11-May-40	11-May-40	Lite
151	Battle of Flanders	to River Meuse	21.0	33.80	1	1	33.80	12-May-40	12-May-40	Lite
152	Battle of Flanders	to Onhaye	4.3	6.92	1	1	6.92	13-May-40	13-May-40	Hvy
153	Battle of Flanders	fighting at Onhaye	0.0	0.00	1	1	0.00	14-May-40	14-May-40	Hvy
154	Battle of Flanders	to Cerfontaine	19.6	31.54	1	1	31.54	15-May-40	15-May-40	Lite
155	Battle of Flanders	to Avesnes	51.4	82.72	1	1	82.72	16-May-40	16-May-40	Lite
156	Battle of Flanders	towards Le Cateau	19.0	30.58	1	1	30.58	17-May-40	17-May-40	Lite
157	Battle of Flanders	to Cambrai	17.8	28.65	1	1	28.65	18-May-40	18-May-40	Lite
158	Battle of Flanders	halted	0.0	0.00	1	1	0.00	19-May-40	19-May-40	Lite
159	Battle of Flanders	to Beaurains	21.6	34.76	1	1	34.76	20-May-40	20-May-40	Lite
160	Battle of Flanders	Total	190.6	306.74	11	11	27.89	10-May-40	20-May-40	Lite
161	Battle of France	Rommel's 7th Panzer Div, to Montagne-Le-Fayel	6.8	10.94	1	1	10.94	05-Jun-40	05-Jun-40	Hvy
162	Battle of France	to W of Thieulloy	13.6	21.89	1	1	21.89	06-Jun-40	06-Jun-40	Med
163	Battle of France	to Sigy	27.3	43.94	1	1	43.94	07-Jun-40	07-Jun-40	Lite
164	Battle of France	to Elbeuf	34.1	54.88	1	1	54.88	08-Jun-40	08-Jun-40	Lite
165	Battle of France	halted on Seine	0.0	0.00	1	1	0.00	09-Jun-40	09-Jun-40	Lite
166	Battle of France	to St. Leonard	64.8	104.29	1	1	104.29	10-Jun-40	10-Jun-40	Lite
167	Battle of France	to St. Valery	13.6	21.89	1	1	21.89	11-Jun-40	11-Jun-40	Lite
168	Battle of France	Total	160.2	257.82	7	7	36.83	05-Jun-40	11-Jun-40	Lite
169	Battle of France	Rommel's 7th Panzer Div, to La Haye Du Puits	150.0	241.40	1	1	241.40	17-Jun-40	17-Jun-40	Lite
170	Battle of France	to outside Cherbourg	33.3	53.59	1	1	53.59	18-Jun-40	18-Jun-40	Lite
171	Battle of France	to Cherbourg	6.3	10.06	1	1	10.06	19-Jun-40	19-Jun-40	Lite
172	Battle of France	Total	189.6	305.05	3	3	101.68	17-Jun-40	19-Jun-40	Lite
173	WW II North Africa	Ger Panzerarmee Afrika, towards Mersa Matruh	100.0	160.93	1	1	160.93	24-Jun-42	24-Jun-42	None
174	WW II Manchuria	Sov 6th Guards Tank Army (elements)	93.2	149.99	1	1	149.99	09-Aug-45	09-Aug-45	None
175	WW II North Africa	Brit 7th Armored Div, to Msus	91.4	147.09	1	1	147.09	04-Feb-41	04-Feb-41	None
176	WW II NW Europe	US 11th Armored Div, to Neufchateau	88.2	141.94	1	1	141.94	29-Dec-44	29-Dec-44	None
177	WW II NW Europe	US 4th Armored Div, to Baud	82.5	132.77	1	1	132.77	06-Aug-44	06-Aug-44	None
178	Arab-Israeli War	Is 1st Div (elements), via El Arish	75.0	120.70	1	1	120.70	05-Jun-67	05-Jun-67	None
179	WW II Manchuria	Sov 6th Guards Tank Army (elements)	74.6	120.06	1	1	120.06	09-Aug-45	09-Aug-45	None
180	WW II NW Europe	US 2nd Armored Div	72.7	117.00	2	2	58.50	21-Dec-44	22-Dec-44	None

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181	WW II East Front	Ger Panzergruppe Guderian (els), towards Minsk	72.0	115.87	1	1	115.87	28-Jun-41	28-Jun-41	None
182	WW II North Africa	Brit 7th Armored Div, via Beda Fomm	68.6	110.40	1	1	110.40	05-Feb-41	05-Feb-41	None
183	WW II NW Europe	Brit 11th Armored Div, towards Antwerp	65.0	104.61	1	1	104.61	03-Sep-44	03-Sep-44	None
184	WW II NW Europe	US 6th Armored Div, to Ploufray	63.0	101.39	1	1	101.39	04-Aug-44	04-Aug-44	None
185	Arab-Israeli War	Is Yoffe Div (elements), to Mitla Pass	119.0	191.51	2	2	95.76	06-Jun-67	07-Jun-67	Lite
186	WW II North Africa	Ger Afrika Korps, towards Benghazi	102.4	164.80	2	2	82.40	03-Apr-41	04-Apr-41	Lite
187	WW II North Africa	Ger Panzerarmee Afrika, towards Mersa Matruh	50.0	80.47	1	1	80.47	25-Jun-42	25-Jun-42	Lite
188	WW II East Front	Ger XVI Panzer Korps, to River Dubissa	50.0	80.47	1	1	80.47	22-Jun-41	22-Jun-41	Lite
189	Arab-Israeli War	Is Yoffe Div (elements), to Bas Sadr	99.4	159.97	2	2	79.98	08-Jun-67	09-Jun-67	Lite
190	Arab-Israeli War	Is Tal Division, to Ismailia	288.0	463.49	6	6	77.25	05-Jun-67	10-Jun-67	Lite
191	WW II North Africa	Ger Afrika Korps, to Agedabia	47.6	76.60	1	1	76.60	02-Apr-41	02-Apr-41	Lite
192	WW II East Front	Ger XLVII Panzer Korps, to Prozhan	47.0	75.64	1	1	75.64	22-Jun-41	22-Jun-41	Lite
193	WW II East Front	Ger 8th Panzer Div, towards Daugavpils	185.0	297.73	4	4	74.43	22-Jun-41	25-Jun-41	Lite
194	WW II East Front	Ger Panzergruppe Guderian, to Slonim	135.6	218.23	3	3	72.74	22-Jun-41	24-Jun-41	Lite
195	Arab-Israeli War	Is Yoffe Div, to Abu Zenina	258.6	416.18	6	6	69.36	05-Jun-67	10-Jun-67	Lite
196	WW II North Africa	Ger Afrika Korps, to Mechili	83.3	134.06	2	2	67.03	05-Apr-41	06-Apr-41	Lite
197	WW II Manchuria	Sov 6th Guards Tank Army (elements)	248.4	399.76	6	6	66.63	09-Aug-45	14-Aug-45	Lite
198	WW II East Front	Ger XXIV Panzer Korps, to Kobrin	41.0	65.98	1	1	65.98	22-Jun-41	22-Jun-41	Lite
199	WW II NW Europe	US 4th Armored Div, towards Rennes	37.5	60.35	1	1	60.35	01-Aug-44	01-Aug-44	Lite
200	WW II NW Europe	US 6th Armored Div, to Quedillac	37.5	60.35	1	1	60.35	02-Aug-44	02-Aug-44	Lite
201	WW II Manchuria	Sov Trans-Baikal Front (elements)	37.3	60.03	1	1	60.03	09-Aug-45	09-Aug-45	Lite
202	WW II NW Europe	US 4th Armored Div, Brittany	253.4	407.81	7	7	58.26	01-Aug-44	07-Aug-44	Med
203	WW II NW Europe	US 4th Armored Div, to Redon	36.0	57.94	1	1	57.94	05-Aug-44	05-Aug-44	Lite
204	Arab-Israeli War	Is Yoffe Div, to Bir Lahfan	34.8	56.01	1	1	56.01	05-Jun-67	05-Jun-67	Lite
205	WW II Manchuria	Sov-Mongolian Mecz Cav Grp to Chengteh	342.0	550.40	10	10	55.04	09-Aug-45	18-Aug-45	Lite
206	WW II North Africa	Ger Afrika Korps, to Halfaya Pass	467.6	752.53	14	14	53.75	02-Apr-41	15-Apr-41	Lite
207	WW II North Africa	Ger Panzerarmee Afrika, to Alamein Line	332.5	535.11	10	10	53.51	21-Jun-42	30-Jun-42	Lite
208	WW II NW Europe	US 6th Armored Div, towards Huetgout	33.0	53.11	1	1	53.11	05-Aug-44	05-Aug-44	Lite
209	WW II Manchuria	Sov Trans-Baikal Front (elements)	31.1	50.05	1	1	50.05	09-Aug-45	09-Aug-45	Lite
210	WW II NW Europe	US 6th Armored Div, Brittany	216.3	348.10	7	7	49.73	01-Aug-44	07-Aug-44	Lite
211	WW II NW Europe	US 4th Armored Div, towards Lorient	30.0	48.28	1	1	48.28	07-Aug-44	07-Aug-44	Lite
212	WW II North Africa	Ger Afrika Korps, to El Adem	119.0	191.51	4	4	47.88	07-Apr-41	10-Apr-41	Lite
213	WW II NW Europe	US 6th Armored Div, towards Autrain	28.5	45.87	1	1	45.87	01-Aug-44	01-Aug-44	Lite
214	WW II NW Europe	Brit 11th Armored Div, to Antwerp	196.7	316.56	7	7	45.22	29-Aug-44	04-Sep-44	Lite
215	WW II NW Europe	US 4th Armored Div, towards Derval	55.5	89.32	2	2	44.66	02-Aug-44	03-Aug-44	Lite
216	Arab-Israeli War	Is Yoffe Div, to Abu Zenina	54.7	88.03	2	2	44.02	09-Jun-67	10-Jun-67	Lite
217	WW II Manchuria	Sov Trans-Baikal Front (elements)	155.4	250.09	6	6	41.68	09-Aug-45	14-Aug-45	Lite
218	WW II NW Europe	Brit 12th Corps, to Ghent	177.8	286.14	7	7	40.88	31-Aug-44	06-Sep-44	Lite
219	WW II Poland	Ger XIX Korps, Poland	250.0	402.34	10	10	40.23	10-Sep-39	19-Sep-39	Lite
220	WW II East Front	Sov 3rd Guards Tank Army, towards Lvov	74.7	120.22	3	3	40.07	22-Jul-44	24-Jul-44	Lite
221	WW II Manchuria	Sov 36th Army	24.8	39.91	1	1	39.91	09-Aug-45	09-Aug-45	Lite
222	WW II North Africa	Ger Afrika Korps, to Halfaya Pass	116.0	186.68	5	5	37.34	11-Apr-41	15-Apr-41	Lite
223	WW II NW Europe	US 6th Armored Div, towards Brest	22.5	36.21	1	1	36.21	07-Aug-44	07-Aug-44	Lite
224	WW II NW Europe	Brit 11th Armored Div, towards Antwerp	21.0	33.80	1	1	33.80	29-Aug-44	29-Aug-44	Lite
225	WW II Manchuria	Sov 2nd Far East Front (elements)	124.2	199.88	6	6	33.31	09-Aug-45	14-Aug-45	Lite

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226	Falklands	Br 2nd Para, Sussex Mt. to Camilla Creek House	8.6	13.84	0.38	0.375	36.91	26-May-82	27-May-82	None
227	Falklands	Br 45 Cmndo, Port San Carlos to New House	11.1	17.86	1	1	17.86	27-May-82	27-May-82	None
228	Falklands	Br 45 Cmndo, New House to Douglas Settlement	7.5	12.07	1	1	12.07	28-May-82	28-May-82	None
229	Falklands	Br 45 Cmndo, at Douglas Settlement	0.0	0.00	1	1	0.00	29-May-82	29-May-82	None
230	Falklands	Br 45 Cmndo, Douglas Settlement to Teal Inlet	11.8	18.99	1	1	18.99	30-May-82	30-May-82	None
231	Falklands	Br 45 Cmndo, Douglas Settlement to Teal Inlet	11.8	18.99	1	1	18.99	30-May-82	30-May-82	None
232	Falklands	Br 45 Cmndo, at Teal Inlet	0.0	0.00	3	3	0.00	31-May-82	02-Jun-82	None
233	Falklands	45 Cmndo, Teal Inlet to SE of Lower Malo House	8.3	13.28	1	1	13.28	03-Jun-82	03-Jun-82	None
234	Falklands	45 Cmndo, SE of Lower Malo House to Mount Kent	7.5	12.07	1	1	12.07	04-Jun-82	04-Jun-82	None
235	Falklands	Total	58.0	93.26	10	10	9.33	27-May-82	04-Jun-82	None
236	Falklands	Br 3 Para, Port San Carlos to Arroyo Pedro R.	17.9	28.81	2	2	14.40	27-May-82	28-May-82	None
237	Falklands	Br 3 Para, Port San Carlos to Arroyo Pedro R.	15.8	25.43	2	2	12.71	27-May-82	28-May-82	None
238	Falklands	Br 3 Para, Arroyo Pedro R. to Teal Inlet	5.7	9.17	1	1	9.17	28-May-82	28-May-82	None
239	Falklands	Br 3 Para, at Teal Inlet	0.0	0.00	1	1	0.00	29-May-82	29-May-82	None
240	Falklands	Br 3 Para, Teal Inlet to Estancia House	15.8	25.43	2	2	12.71	30-May-82	31-May-82	None
241	Falklands	Total	55.2	88.84	8	8	11.10	27-May-82	31-May-82	None
242	WW II Tunisia	Br 2nd Parachute Bn, Depienne to S of Oudha	12.2	19.63	1	1	19.63	30-Nov-42	30-Nov-42	Hvy
243	WW II Tunisia	Br 2nd Para Bn, disengaging	11.0	17.70	1	1	17.70	01-Dec-42	01-Dec-42	Hvy
244	WW II Tunisia	Br 2nd Para Bn, defense of "Cactus Farm"	0.0	0.00	1	1	0.00	02-Dec-42	02-Dec-42	Hvy
245	WW II Tunisia	Br 2nd Para Bn, El Fedja to Ksar Tyr	9.1	14.65	1	1	14.65	03-Dec-42	03-Dec-42	Lite
246	WW II Tunisia	Total	32.3	51.98	4	4	13.00	30-Nov-42	03-Dec-42	Varied
247	WW II NW Europe	Br 4th Grenadier Guards, Rhade to Coesfeld	19.3	30.98	1	1	30.98	29-Mar-45	29-Mar-45	Lite
248	WW II NW Europe	ditto, to Greven	21.7	34.92	1	1	34.92	30-Mar-45	30-Mar-45	Lite
249	WW II NW Europe	ditto, in Greven	0.0	0.00	1	1	0.00	31-Mar-45	31-Mar-45	Lite
250	WW II NW Europe	ditto, to Dortmund-Ems canal	5.0	8.05	1	1	8.05	01-Apr-45	01-Apr-45	Lite
251	WW II NW Europe	ditto, to Lengerich	8.0	12.87	1	1	12.87	02-Apr-45	02-Apr-45	Lite
252	WW II NW Europe	ditto, to Missingen	21.7	34.92	1	1	34.92	03-Apr-45	03-Apr-45	Lite
253	WW II NW Europe	ditto, to Minden	42.0	67.59	1	1	67.59	04-Apr-45	04-Apr-45	Lite
254	WW II NW Europe	NA	NA	0.00	1	1	0.00	05-Apr-45	05-Apr-45	Lite
255	WW II NW Europe	NA	NA	0.00	1	1	0.00	06-Apr-45	06-Apr-45	Lite
256	WW II NW Europe	ditto, Petershagen to Bordenau	30.0	48.28	1	1	48.28	07-Apr-45	07-Apr-45	Lite
257	WW II NW Europe	Br 6th Guards Arm'd Bde, Peddenberg to Haltern	20.5	32.99	1	1	32.99	28-Mar-45	28-Mar-45	Lite
258	WW II NW Europe	ditto, to Dulmen	7.5	12.07	1	1	12.07	29-Mar-45	29-Mar-45	Lite
259	WW II NW Europe	ditto, (Coldstreams) to Appelhusen	8.1	13.04	1	1	13.04	30-Mar-45	30-Mar-45	Lite
260	WW II NW Europe	ditto, (Scots) to S of Nottuln	4.0	6.44	1	1	6.44	30-Mar-45	30-Mar-45	Lite
261	WW II NW Europe	ditto, (Coldstreams) to Albachten	4.9	7.89	1	1	7.89	31-Mar-45	31-Mar-45	Lite
262	WW II NW Europe	ditto, (Scots) to Bosensell	5.8	9.33	1	1	9.33	31-Mar-45	31-Mar-45	Lite
263	WW II NW Europe	ditto, (Scots) to Roxel	3.8	6.04	1	1	6.04	01-Apr-45	01-Apr-45	Lite
264	WW II NW Europe	ditto, (Coldstreams) to Munster	6.1	9.82	1	1	9.82	02-Apr-45	02-Apr-45	Lite
265	WW II NW Europe	ditto, (Scots) to Munster	7.7	12.39	1	1	12.39	02-Apr-45	02-Apr-45	Lite
266	WW II NW Europe	Br 6th Guards Arm'd Bde								
267	WW II NW Europe	ditto, N of Hanover to Ramlingen	15.8	25.43	1	1	25.43	11-Apr-45	11-Apr-45	Lite
268	WW II NW Europe	ditto, to Celle	9.3	14.97	1	1	14.97	12-Apr-45	12-Apr-45	Lite
269	WW II NW Europe	ditto, to N of Weyhausen	17.5	28.16	1	1	28.16	13-Apr-45	13-Apr-45	Lite
270	WW II NW Europe	ditto, to outskirts of Uelzen	14.6	23.50	1	1	23.50	14-Apr-45	14-Apr-45	Lite

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271	WW II NW Europe	Total	57.2	92.05	4	4	23.01	11-Apr-45	14-Apr-45	Lite
272	WW II East Africa	a. Advance to Mogadishu, 11-25 Feb 1941								
273	WW II East Africa	24 Gold Coast Bde, Afmandu to Afra Yak	40.0	64.37	1	1	64.37	11-Feb-41	11-Feb-41	Lite
274	WW II East Africa	ditto, to Bulu Erillo	14.0	22.53	1	1	22.53	12-Feb-41	12-Feb-41	Med
275	WW II East Africa	ditto, at Bulu Erillo	0.0	0.00	6	6	0.00	13-Feb-41	18-Feb-41	Lite
276	WW II East Africa	ditto, to Mabungo bridgehead, Juba R.	27.1	43.61	1	1	43.61	19-Feb-41	19-Feb-41	Lite
277	WW II East Africa	ditto, at Mabungo bridgehead, Juba R.	0.0	0.00	1	1	0.00	20-Feb-41	20-Feb-41	Hvy
278	WW II East Africa	ditto, to Gelib	42.2	67.91	2	2	33.96	21-Feb-41	22-Feb-41	Med
279	WW II East Africa	Total	123.3	198.43	12	12	16.54	11-Feb-41	22-Feb-41	Lite
280	WW II East Africa	1st So African Bde, Afmadu to Eyadera	59.6	95.92	1	1	95.92	13-Feb-41	13-Feb-41	Lite
281	WW II East Africa	ditto, to Gobwen	10.0	16.09	1	1	16.09	14-Feb-41	14-Feb-41	Med
282	WW II East Africa	ditto, at Gobwen	0.0	0.00	2	2	0.00	15-Feb-41	16-Feb-41	Lite
283	WW II East Africa	ditto, to Lonte bridgehead, Juba R.	14.0	22.53	1	1	22.53	17-Feb-41	17-Feb-41	Lite
284	WW II East Africa	ditto, at Lonte bridgehead, Juba R.	0.0	0.00	3	3	0.00	18-Feb-41	20-Feb-41	Hvy
285	WW II East Africa	ditto, to Margherita	23.0	37.01	1	1	37.01	21-Feb-41	21-Feb-41	Lite
286	WW II East Africa	ditto, to Gelib	30.8	49.57	1	1	49.57	22-Feb-41	22-Feb-41	Med
287	WW II East Africa	Total	137.4	221.12	10	10	22.11	13-Feb-41	22-Feb-41	Lite
288	WW II East Africa	23rd Nigerian Bde, Gelib to Modun	101.9	163.99	1	1	163.99	23-Feb-41	23-Feb-41	Lite
289	WW II East Africa	ditto, to Golvin	86.4	139.05	1	1	139.05	24-Feb-41	24-Feb-41	Lite
290	WW II East Africa	ditto, to Mogadishu	85.1	136.96	1	1	136.96	25-Feb-41	25-Feb-41	Lite
291	WW II East Africa	Total	273.4	439.99	3	3	146.66	23-Feb-41	25-Feb-41	Lite
292	WW II East Africa	b. Race North to Jijiga, 28 Feb - 17 Mar 1941								
293	WW II East Africa	11th African Div, Mogadishu to Villag. Abruzzi	50.0	80.47	1	1	80.47	28-Feb-41	28-Feb-41	Lite
294	WW II East Africa	ditto, at Villagio Abruzzi	0.0	0.00	1	1	0.00	01-Mar-41	01-Mar-41	Lite
295	WW II East Africa	ditto, to Bulu Burti	84.2	135.51	1	1	135.51	02-Mar-41	02-Mar-41	Lite
296	WW II East Africa	ditto, to Ferfer	98.2	158.04	1	1	158.04	03-Mar-41	03-Mar-41	Lite
297	WW II East Africa	ditto, at Ferfer	0.0	0.00	2	2	0.00	04-Mar-41	05-Mar-41	Lite
298	WW II East Africa	ditto, to Scillare	87.0	140.01	1	1	140.01	06-Mar-41	06-Mar-41	Lite
299	WW II East Africa	ditto, to Gabradarre	65.2	104.93	1	1	104.93	07-Mar-41	07-Mar-41	Lite
300	WW II East Africa	ditto, at Gabradarre	0.0	0.00	1	1	0.00	08-Mar-41	08-Mar-41	Lite
301	WW II East Africa	ditto, to Daghabur	147.9	238.02	2	2	119.01	09-Mar-41	10-Mar-41	Lite
302	WW II East Africa	ditto, at Daghabur	0.0	0.00	6	6	0.00	11-Mar-41	16-Mar-41	Lite
303	WW II East Africa	ditto, to Jijiga	106.3	171.07	1	1	171.07	17-Mar-41	17-Mar-41	Lite
304	WW II East Africa	Total	638.8	1028.05	18	18	57.11	28-Feb-41	17-Mar-41	Lite
305	WW II East Africa	c. To Addis Abbaba, 21 Mar-6 Apr 1941								
306	WW II East Africa	11th African Div, Jijiga(?) to Marda Pass	2.0	3.22	1	1	3.22	21-Mar-41	21-Mar-41	Hvy
307	WW II East Africa	ditto, to Tug Fafan	18.0	28.97	1	1	28.97	22-Mar-41	22-Mar-41	Lite
308	WW II East Africa	ditto, to Babile Gap	29.7	47.80	1	1	47.80	23-Mar-41	23-Mar-41	Lite
309	WW II East Africa	ditto, to River Bisidimo	5.2	8.37	1	1	8.37	24-Mar-41	24-Mar-41	Lite
310	WW II East Africa	ditto, at River Bisidimo	0.0	0.00	1	1	0.00	25-Mar-41	25-Mar-41	Lite
311	WW II East Africa	ditto, to Harar	10.3	16.58	1	1	16.58	26-Mar-41	26-Mar-41	Lite
312	WW II East Africa	ditto, to Asta Littorio	111.2	178.96	6	6	29.83	27-Mar-41	01-Apr-41	Lite
313	WW II East Africa	ditto, to Awash	61.5	98.97	2	2	49.49	02-Apr-41	03-Apr-41	Lite
314	WW II East Africa	ditto, at Awash	0.0	0.00	1	1	0.00	04-Apr-41	04-Apr-41	Lite
315	WW II East Africa	ditto, to Acachi	129.2	207.93	1	1	207.93	05-Apr-41	05-Apr-41	Lite

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS
316	WW II East Africa	ditto, to Addis Abbaba	10.0	16.09	1	1	16.09	06-Apr-41	06-Apr-41	Lite
317	WW II East Africa	Total	377.1	606.88	17	17	35.70	21-Mar-41	06-Apr-41	Lite

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CAA-RP-90-04

NO.	OPERATION NAME/PHASE	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
1	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	Jackson's Valley Campaign (part), Am. Civil War
2	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	
3	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	Jackson defeated Banks
4	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	
5	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	
6	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	
7	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	
8	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	
9	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	
10	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	
11	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	
12	Winchester Campaign	Foot	Rolling	Temperate	Firm	NA	
13	Second Bull Run	Foot	Flat	Temperate	Firm	NA	Jackson's march to outflank Pope, Am. Civil War
14	Second Bull Run	Foot	Flat	Temperate	Firm	NA	
15	Second Bull Run	Foot	Flat	Temperate	Firm	NA	
16	Vicksburg Campaign	Horse	NA	Temperate	Firm	1700	Grierson's Cavalry Raid, Am. Civil War
17	Vicksburg Campaign	Horse	NA	Temperate	Firm	NA	
18	Vicksburg Campaign	Horse	NA	Temperate	Firm	NA	
19	Vicksburg Campaign	Horse	NA	Temperate	Firm	NA	
20	Vicksburg Campaign	Horse	NA	Temperate	Firm	NA	
21	Wilderness Campaign	Horse	Flat	Temperate	Firm	10000	Sheridan's Cavalry Corps, Am. Civil War
22	Wilderness Campaign	Horse	Flat	Temperate	Firm	10000	
23	Wilderness Campaign	Horse	Flat	Temperate	Firm	10000	
24	Wilderness Campaign	Horse	Flat	Temperate	Firm	10000	
25	Wilderness Campaign	Horse	Flat	Temperate	Firm	10000	
26	Washington Raid	Foot	Rolling	Temperate	Firm	15000	Jubal Early's Corps, Am. Civil War
27	Washington Raid	Foot	Rolling	Temperate	Firm	15000	
28	Washington Raid	Foot	Rolling	Temperate	Firm	15000	
29	Washington Raid	Foot	Rolling	Temperate	Firm	15000	
30	Washington Raid	Foot	Rolling	Temperate	Firm	15000	
31	Washington Raid	Foot	Rolling	Temperate	Firm	15000	Defeat of some 7,000 union troops
32	Washington Raid	Foot	Rolling	Temperate	Firm	15000	
33	Washington Raid	Foot	Rolling	Temperate	Firm	15000	
34	Washington Raid	Foot	Rolling	Temperate	Firm	15000	Withdrew in evening as 10,000 Union troops arrived
35	Washington Raid	Foot	Rolling	Temperate	Firm	15000	
36	Washington Raid	Foot	Rolling	Temperate	Firm	15000	
37	Washington Raid	Foot	Rolling	Temperate	Firm	15000	
38	Boer War	Foot	NA	Temperate	Firm	5000	French's Cavalry Division, Boer War
39	Boer War	Foot	NA	Temperate	Firm	5000	
40	Boer War	Foot	NA	Temperate	Firm	5000	
41	Boer War	Foot	NA	Temperate	Firm	5000	
42	Boer War	Foot	NA	Temperate	Firm	5000	
43	Boer War	Foot	NA	Temperate	Firm	5000	
44	Boer War	Foot	NA	Temperate	Firm	5000	
45	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	Schlieffen Plan, World War I

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NO.	OPERATION NAME/PHASE	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
46	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	On this date 1st Army signalled it had "reached the limit of its endurance."
47	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
48	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
49	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
50	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
51	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
52	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
53	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
54	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
55	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
56	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
57	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
58	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
59	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
60	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
61	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
62	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
63	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
64	Schlieffen Plan	Foot	Flat	Temperate	Firm	Corps	
65	Cavalry at Gaza	Horse	Rolling	Desert	Firm	Div	
66	Cavalry at Gaza	Horse	Rolling	Desert	Firm	Div	
67	Cavalry at Gaza	Horse	Rolling	Desert	Firm	Div	
68	Cavalry at Gaza	Horse	Rolling	Desert	Firm	Div	
69	Cavalry at Gaza	Horse	Rolling	Desert	Firm	Div	
70	Battle of France	Foot	Rolling	Temperate	Firm	Corps	Manstein's XXXVIII Corps in France, World War II
71	Battle of France	Foot	Rolling	Temperate	Firm	Corps	
72	Battle of France	Foot	Rolling	Temperate	Firm	Corps	
73	Battle of France	Foot	Rolling	Temperate	Firm	Corps	
74	Battle of France	Foot	Rolling	Temperate	Firm	Corps	
75	Battle of France	Foot	Rolling	Temperate	Firm	Corps	
76	Battle of France	Foot	Rolling	Temperate	Firm	Corps	
77	Battle of France	Foot	Rolling	Temperate	Firm	Corps	
78	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
79	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
80	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Guderian's XIX Corps to the Channel, World War II
81	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
82	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
83	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Crossing of Meuse River
84	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
85	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
86	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Breakout from Meuse River bridgehead Official halt ordered, but "Reconnaissance in force" continued
87	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
88	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
89	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Reached coast of English Channel
90	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
							Guderian's XIX Corps to the Channel, World War II

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NO.	OPERATION NAME/PHASE	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
91	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
92	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
93	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Crossing of Meuse River
94	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
95	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
96	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Breakout from Meuse River bridgehead
97	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Official halt ordered, but "Reconnaissance in force" continued
98	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
99	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
100	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
101	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
102	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Guderian's XIX Corps to the Channel, World War II
103	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
104	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
105	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
106	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Crossing of Meuse River
107	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
108	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
109	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Breakout from Meuse River bridgehead
110	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Official halt ordered, but "Reconnaissance in force" continued
111	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
112	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
113	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
114	Battle of France	Motor	Rolling	Temperate	Firm	Div	
115	Battle of France	Motor	Rolling	Temperate	Firm	Div	
116	Battle of France	Motor	Rolling	Temperate	Firm	Div	
117	Battle of France	Motor	Rolling	Temperate	Firm	Div	
118	Battle of France	Motor	Rolling	Temperate	Firm	Div	
119	Battle of France	Motor	Rolling	Temperate	Firm	Div	
120	Battle of France	Motor	Rolling	Temperate	Firm	Div	
121	Battle of France	Motor	Rolling	Temperate	Firm	Div	
122	Battle of France	Motor	Rolling	Temperate	Firm	Div	
123	Battle of France	Motor	Rolling	Temperate	Firm	Div	
124	Battle of France	Motor	Rolling	Temperate	Firm	Div	
125	Battle of France	Motor	Rolling	Temperate	Firm	Div	
126	Battle of France	Motor	Rolling	Temperate	Firm	Div	
127	Battle of France	Motor	Rolling	Temperate	Firm	Div	
128	Battle of France	Motor	Rolling	Temperate	Firm	Div	
129	Battle of France	Motor	Rolling	Temperate	Firm	Div	
130	Battle of France	Motor	Rolling	Temperate	Firm	Div	
131	Battle of France	Motor	Rolling	Temperate	Firm	Div	
132	Battle of France	Motor	Rolling	Temperate	Firm	Div	
133	Battle of France	Motor	Rolling	Temperate	Firm	Div	
134	Battle of France	Motor	Rolling	Temperate	Firm	Div	
135	Battle of France	Motor	Rolling	Temperate	Firm	Div	

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NO.	OPERATION NAME/PHASE	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
136	Battle of France	Motor	Rolling	Temperate	Firm	Div	Panzergruppe Guderian, XXXIX Panzer Korps, World War II
137	Battle of France	Motor	Rolling	Temperate	Firm	Div	
138	Battle of France	Motor	Rolling	Temperate	Firm	Div	
139	Battle of France	Motor	Rolling	Temperate	Firm	Div	
140	Battle of France	Motor	Rolling	Temperate	Firm	Div	
141	Battle of France	Motor	Rolling	Temperate	Firm	Div	
142	Battle of France	Motor	Rolling	Temperate	Firm	Div	
143	Battle of France	Motor	Rolling	Temperate	Firm	Div	
144	Battle of France	Motor	Rolling	Temperate	Firm	Div	
145	Battle of France	Motor	Rolling	Temperate	Firm	Div	
146	Battle of France	Motor	Rolling	Temperate	Firm	Div	Rommel's 7th Panzer Division, World War II, May 1940
147	Battle of France	Motor	Rolling	Temperate	Firm	Div	
148	Battle of France	Motor	Rolling	Temperate	Firm	Div	
149	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
150	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
151	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
152	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
153	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
154	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
155	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
156	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Battle for Meuse River bridgehead Battle for Meuse River bridgehead
157	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
158	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Note 1 Note 1
159	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	
160	Battle of Flanders	Motor	Rolling	Temperate	Firm	Div	Rommel's 7th Panzer Division, World War II, June 1940
161	Battle of France	Motor	Rolling	Temperate	Firm	Div	
162	Battle of France	Motor	Rolling	Temperate	Firm	Div	
163	Battle of France	Motor	Rolling	Temperate	Firm	Div	
164	Battle of France	Motor	Rolling	Temperate	Firm	Div	
165	Battle of France	Motor	Rolling	Temperate	Firm	Div	
166	Battle of France	Motor	Rolling	Temperate	Firm	Div	
167	Battle of France	Motor	Rolling	Temperate	Firm	Div	
168	Battle of France	Motor	Rolling	Temperate	Firm	Div	
169	Battle of France	Motor	Rolling	Temperate	Firm	Div	
170	Battle of France	Motor	Rolling	Temperate	Firm	Div	Rommel's 7th Panzer Division, World War II, June 1940. See Note 2.
171	Battle of France	Motor	Rolling	Temperate	Firm	Div	
172	Battle of France	Motor	Rolling	Temperate	Firm	Div	
173	WW II North Africa	Motor	Rolling	Desert	Firm	Army	
174	WW II North Africa	Motor	Rolling	Desert	Firm	Army	
175	WW II North Africa	Motor	Rolling	Desert	Firm	Div	
176	WW II NW Europe	Motor	Hilly	Temperate	Snow	Div	
177	WW II NW Europe	Motor	Hilly	Temperate	Firm	Div	
178	Arab-Israeli War	Motor	Rolling	Desert	Firm	Div	
179	WW II Manchuria	Motor	Flat	Desert	Firm	Army	
180	WW II NW Europe	Motor	Rolling	Temperate	Snow	Div	Administrative march

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NO.	OPERATION NAME/PHASE	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
181	WW II East Front	Motor	Flat	Temperate	Firm	Group	Elements of Panzergruppe Guderian moving in the direction of Minsk Distance is approximate
182	WW II North Africa	Motor	Flat	Desert	Firm	Div	
183	WW II NW Europe	Motor	Flat	Temperate	Firm	Div	
184	WW II NW Europe	Motor	Rolling	Temperate	Firm	Div	
185	Arab-Israeli War	Motor	Flat	Desert	Firm	Div	
186	WW II North Africa	Motor	Flat	Desert	Firm	Corps	
187	WW II North Africa	Motor	Flat	Desert	Firm	Army	
188	WW II East Front	Motor	Flat	Steppe	Firm	Corps	
189	Arab-Israeli War	Motor	Flat	Desert	Firm	Div	
190	Arab-Israeli War	Motor	Flat	Desert	Firm	Div	
191	WW II North Africa	Motor	Flat	Desert	Firm	Corps	
192	WW II East Front	Motor	Flat	Steppe	Firm	Corps	
193	WW II East Front	Motor	Flat	Steppe	Firm	Div	
194	WW II East Front	Motor	Flat	Steppe	Firm	Group	
195	Arab-Israeli War	Motor	Flat	Desert	Firm	Div	
196	WW II North Africa	Motor	Flat	Desert	Firm	Corps	
197	WW II Manchuria	Motor	Flat	Desert	Firm	Army	
198	WW II East Front	Motor	Flat	Steppe	Firm	Corps	
199	WW II NW Europe	Motor	Rolling	Temperate	Firm	Div	
200	WW II NW Europe	Motor	Rolling	Temperate	Firm	Div	
201	WW II Manchuria	Motor	Flat	Desert	Firm	Front	
202	WW II NW Europe	Motor	Flat	Temperate	Firm	Div	
203	WW II NW Europe	Motor	Rolling	Temperate	Firm	Div	
204	Arab-Israeli War	Motor	Flat	Desert	Firm	Div	
205	WW II Manchuria	Motor	Flat	Desert	Firm	Grp	
206	WW II North Africa	Motor	Flat	Desert	Firm	Corps	
207	WW II North Africa	Motor	Flat	Desert	Firm	Army	
208	WW II NW Europe	Motor	Rolling	Temperate	Firm	Div	
209	WW II Manchuria	Motor	Flat	Desert	Firm	Front	
210	WW II NW Europe	Motor	Flat	Temperate	Firm	Div	
211	WW II NW Europe	Motor	Flat	Temperate	Firm	Div	
212	WW II North Africa	Motor	Flat	Desert	Firm	Corps	
213	WW II NW Europe	Motor	Rolling	Temperate	Firm	Div	
214	WW II NW Europe	Motor	Flat	Temperate	Firm	Div	
215	WW II NW Europe	Motor	Rolling	Temperate	Firm	Div	
216	Arab-Israeli War	Motor	Rolling	Desert	Firm	Div	
217	WW II Manchuria	Motor	Flat	Desert	Firm	Front	See note 3
218	WW II NW Europe	Motor	Flat	Desert	Firm	Corps	
219	WW II Poland	Motor	Rolling	Temperate	Firm	Corps	
220	WW II East Front	Motor	Rolling	Temperate	Firm	Army	See note 3.
221	WW II Manchuria	Motor	Flat	Desert	Firm	Army	
222	WW II North Africa	Motor	Hilly	Desert	Firm	Corps	
223	WW II NW Europe	Motor	Flat	Desert	Firm	Div	See note 3.
224	WW II NW Europe	Motor	Flat	Temperate	Firm	Div	
225	WW II Manchuria	Motor	Flat	Desert	Firm	Front	

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NO.	OPERATION NAME/PHASE	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
226	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	2200 26 May 1982 to 0700 27 May 1982 = 9 hours. See Notes 4 and 5.
227	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	Brit 45 Commando, circa 0630 to 2200 = 15.5 hours.
228	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	Circa 0630 to 1300 = 6.5 hours.
229	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	
230	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	Circa 1000 to 1730 = 7.5 hours, advance elements
231	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	Circa 1000 to 2100 = 11 hours, main body
232	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	
233	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	Departed circa 0630
234	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	
235	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	
236	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	For route taken by A and C Companies, circa 1100 to 1100 = 24 hours
237	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	For route taken by B Company, circa 1100 27 May to 1100 28 May = 24 hours
238	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	Circa 1615 to 2300 = 6.75 hours
239	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	
240	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	Circa 1615 to 0630 and 1615 to 1740 = 15.67 hours
241	Falklands	Foot	Hilly	Sub-Arctic	Boggy	Bn	
242	WW II Tunisia	Foot	Hilly	Desert	Sandy	Bn	Note 6. Marched from 0001 to 1100, then fought around Oudna.
243	WW II Tunisia	Foot	Hilly	Desert	Sandy	Bn	Marched from 1830 1 Dec to c. 0430 2 Dec, Djebel Sidi bou Hadjeba to
244	WW II Tunisia	Foot	Hilly	Desert	Sandy	Bn	"Cactus Farm" at El Fedja.
245	WW II Tunisia	Foot	Hilly	Desert	Sandy	Bn	Marched from c. 1800 2 Dec to 1200 3 Dec, El Fedja to Ksar Tyr.
246	WW II Tunisia	Foot	Hilly	Desert	Sandy	Bn	
247	WW II NW Europe	Motor	NA	NA	NA	Rgt	Plus elements, 6th Airborne Div
248	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
249	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
250	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
251	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
252	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
253	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
254	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
255	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
256	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
257	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
258	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
259	WW II NW Europe	Motor	NA	NA	NA	Rgt	3 Scots Guards, 4 Coldstream Guards, and elements, US 17th Airborne Div
260	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
261	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
262	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
263	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
264	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
265	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
266	WW II NW Europe	Motor	NA	NA	NA	Rgt	ditto
267	WW II NW Europe	Motor	NA	NA	NA	Bde	3 Scots Guards, 4 Coldstream Guards, and elements, 15th Infantry Div
268	WW II NW Europe	Motor	NA	NA	NA	Bde	ditto
269	WW II NW Europe	Motor	NA	NA	NA	Bde	ditto
270	WW II NW Europe	Motor	NA	NA	NA	Bde	ditto

ROWLAND

NO.	OPERATION NAME/PHASE	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
271	WW II NW Europe	Motor	NA	NA	NA	Bde	ditto
272	WW II East Africa	Motor	Flat	Desert	NA	Bde	Conquest of Somaliland, Feb-Apr 1941
273	WW II East Africa	Motor	Flat	Desert	NA	Bde	
274	WW II East Africa	Motor	Flat	Desert	NA	Bde	
275	WW II East Africa	Motor	Flat	Desert	NA	Bde	
276	WW II East Africa	Motor	Flat	Desert	NA	Bde	
277	WW II East Africa	Motor	Flat	Desert	NA	Bde	
278	WW II East Africa	Motor	Rolling	Desert	NA	Bde	
279	WW II East Africa	Motor	Flat	Desert	NA	Bde	
280	WW II East Africa	Motor	Flat	Desert	NA	Bde	
281	WW II East Africa	Motor	Flat	Desert	NA	Bde	
282	WW II East Africa	Motor	Flat	Desert	NA	Bde	
283	WW II East Africa	Motor	Flat	Desert	NA	Bde	
284	WW II East Africa	Motor	Flat	Desert	NA	Bde	
285	WW II East Africa	Motor	Rolling	Desert	NA	Bde	
286	WW II East Africa	Motor	Rolling	Desert	NA	Bde	
287	WW II East Africa	Motor	Rolling	Desert	NA	Bde	
288	WW II East Africa	Motor	Rolling	Desert	NA	Bde	
289	WW II East Africa	Motor	Rolling	Desert	NA	Bde	
290	WW II East Africa	Motor	Rolling	Desert	NA	Bde	
291	WW II East Africa	Motor	NA	Desert	NA	Bde	
292	WW II East Africa	Motor	Rolling	Desert	NA	Div	Conquest of Somaliland, Feb-Apr 1941
293	WW II East Africa	Motor	Rolling	Desert	NA	Div	
294	WW II East Africa	Motor	Rolling	Desert	NA	Div	
295	WW II East Africa	Motor	Rolling	Desert	NA	Div	
296	WW II East Africa	Motor	Rolling	Desert	NA	Div	
297	WW II East Africa	Motor	Rolling	Desert	NA	Div	
298	WW II East Africa	Motor	Rolling	Desert	NA	Div	
299	WW II East Africa	Motor	Rolling	Desert	NA	Div	
300	WW II East Africa	Motor	Rolling	Desert	NA	Div	
301	WW II East Africa	Motor	Rolling	Desert	NA	Div	
302	WW II East Africa	Motor	Rolling	Desert	NA	Div	
303	WW II East Africa	Motor	Rolling	Desert	NA	Div	
304	WW II East Africa	Motor	NA	Desert	NA	Div	
305	WW II East Africa	Motor	Mountain	NA	NA	Div	Conquest of Somaliland, Feb-Apr 1941
306	WW II East Africa	Motor	Mountain	NA	NA	Div	
307	WW II East Africa	Motor	Mountain	NA	NA	Div	
308	WW II East Africa	Motor	Mountain	NA	NA	Div	
309	WW II East Africa	Motor	Mountain	NA	NA	Div	
310	WW II East Africa	Motor	Mountain	NA	NA	Div	
311	WW II East Africa	Motor	Mountain	NA	NA	Div	
312	WW II East Africa	Motor	Mountain	NA	NA	Div	
313	WW II East Africa	Motor	Mountain	NA	NA	Div	
314	WW II East Africa	Motor	Mountain	NA	NA	Div	
315	WW II East Africa	Motor	Mountain	NA	NA	Div	

ROWLAND

NO.	OPERATION NAME/PHASE	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING	FORCE SIZE	COMMENTS
316	WW II East Africa	Motor	Mountain	NA	NA	Div	
317	WW II East Africa	Motor	NA	NA	NA	Div	

SAVKIN

1. Data Source:

- a. Title: Tempy Nastupleniya [Rates of Advance] (in Russian)
- b. Author: Savkin, COL Vasiliy Yefisovich
- c. Date: 1965
- d. Organization: Military Publishing House, Ministry of Defense, Moscow
- e. Number: NA
- f. Available from: Publisher

2. Data Description:

a. The SAVKIN data are taken from the appendix of the source. The origins of these data are not identified, but appear to be based on a variety of Soviet military history studies.

b. The source provides distances, durations, and average rates of advance for 81 operations conducted by the Soviet Red Army in World War II, grouped into four periods or phases of the war. The first period includes the defense of Moscow and other actions of 1941 and 1942. The second period includes the defense of Stalingrad and other actions in 1942 and 1943. The third period includes the major Soviet offensives on their western front in 1944 and 1945. The fourth period includes the Soviet offensives in the Far East conducted in 1945.

3. Discussion and Comments:

a. Some of the source's rates of advance do not agree with the stated distances and elapsed times. For our work, we assumed that the distances and elapsed times were correct, and recomputed the rates from them.

b. All of the source's data are for operations in which the Soviet Red Army was victorious. It gives no data on Soviet retreats, such as occurred during Germany's initial invasion of the Soviet Union under Operation Barbarossa.

c. The source does not give the details of terrain, principal means of locomotion, or degree of enemy opposition. While Savkin's text may shed some light on these factors, it is in Russian and no English translation of it seems to be available.

d. The source's data for the Manchurian campaign are (with one exception) identical to those given in Appendix 3 of Glantz, LTC David M., "August Storm: The Soviet 1945 Strategic Offensive in Manchuria," Leavenworth Papers No. 7, US Army Command and General Staff College, Fort Leavenworth, KS, February 1983. The exception is that the source omits the Cav-Mech Group's advance on the Trans-Baikal Front, reported in Glantz as 42-55 km/day. Glantz, in turn, obtained his information from "The Campaign of the Soviet Armed Forces in the Far East in 1945: Facts and Figures," Military History Journal (Soviet), August 1945, Table 6.

4. Data Table Notes: These advances presumably are mainly by forces that were only lightly engaged.

SAVKIN

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	Battle of Moscow	16th Army	N/U	100	N/U	20	5.00	Dec-41	Dec-41	N/A	FOOT	N/A
2	"	5th Army	N/U	33	N/U	20	1.65	Dec-41	Dec-41	N/A	FOOT	N/A
3	"	49th Army	N/U	20	N/U	5	4.00	Dec-41	Dec-41	N/A	FOOT	N/A
4	"	50th Army	N/U	56	N/U	12	4.67	Dec-41	Dec-41	N/A	FOOT	N/A
5	"	10th Army	N/U	210	N/U	20	10.50	Dec-41	Dec-41	N/A	FOOT	N/A
6	"	1st Shock Army	N/U	120	N/U	20	6.00	Dec-41	Dec-41	N/A	FOOT	N/A
7	"	20th Army	N/U	110	N/U	20	5.50	Dec-41	Dec-41	N/A	FOOT	N/A
8	Toropeshku-Kholm	3rd Shock Army	N/U	230	N/U	21	10.95	Jan-42	Jan-42	N/A	FOOT	N/A
9	"	4th Shock Army	N/U	260	N/U	21	12.38	Jan-42	Jan-42	N/A	FOOT	N/A
10	Battle on the Volga	21st Army	N/U	100	N/U	5	20.00	Nov-42	Nov-42	N/A	FOOT	N/A
11	"	5th Tank Army	N/U	140	N/U	5	28.00	Nov-42	Nov-42	N/A	MOTOR	N/A
12	"	65th Army	N/U	70	N/U	5	14.00	Nov-42	Nov-42	N/A	FOOT	N/A
13	"	57th Army	N/U	50	N/U	4	12.50	Nov-42	Nov-42	N/A	FOOT	N/A
14	"	1st Guards Army	N/U	220	N/U	15	14.67	Dec-42	Dec-42	N/A	FOOT	N/A
15	"	3rd Guards Army	N/U	150	N/U	15	10.00	Dec-42	Dec-42	N/A	FOOT	N/A
16	Ostrogorsk-Rossoshchansk	40th Army	N/U	85	N/U	6	14.17	Jan-43	Jan-43	N/A	FOOT	N/A
17	Orlovsk	11th Guards Army	N/U	80	N/U	8	10.00	Jul-43	Jul-43	N/A	FOOT	N/A
18	Operations By Minsk R.	5th Shock Army	N/U	60	N/U	12	5.00	Aug-43	Aug-43	N/A	FOOT	N/A
19	Belgorod-Kharkov	5th Guards Army	N/U	90	N/U	9	10.00	Aug-43	Aug-43	N/A	FOOT	N/A
20	"	1st Tank Army	N/U	100	N/U	5	20.00	Aug-43	Aug-43	N/A	MOTOR	N/A
21	Chernigov-Pripyat	65th Army	N/U	100	N/U	12	8.33	Sep-43	Sep-43	N/A	FOOT	N/A
22	Bug-Dnestr	1st Tank Army	N/U	200	N/U	10	20.00	Mar-44	Mar-44	N/A	MOTOR	N/A
23	"	2nd Tank Army	N/U	140	N/U	4	35.00	Mar-44	Mar-44	N/A	MOTOR	N/A
24	"	5th Guards Tank Army	N/U	140	N/U	4	35.00	Mar-44	Mar-44	N/A	MOTOR	N/A
25	"	6th Tank Army	N/U	140	N/U	4	35.00	Mar-44	Mar-44	N/A	MOTOR	N/A
26	Belorussia	5th Guards Tank Army	N/U	160	N/U	4	40.00	Jun-44	Jun-44	N/A	MOTOR	N/A
27	"	5th Army	N/U	150	N/U	8	18.75	Jun-44	Jun-44	N/A	FOOT	N/A
28	"	11th Guards Army	N/U	160	N/U	9	17.78	Jun-44	Jun-44	N/A	FOOT	N/A
29	"	49th Army	N/U	60	N/U	5	12.00	Jun-44	Jun-44	N/A	FOOT	N/A
30	"	3rd Army	N/U	80	N/U	5	16.00	Jun-44	Jun-44	N/A	FOOT	N/A
31	"	65th Army	N/U	65	N/U	5	13.00	Jun-44	Jun-44	N/A	FOOT	N/A
32	Lvov-Sandomiersk	1st Guards Tank Army	N/U	260	N/U	14	18.57	Jul-44	Jul-44	N/A	MOTOR	N/A
33	"	3rd Guards Tank Army	N/U	300	N/U	12	25.00	Jul-44	Jul-44	N/A	MOTOR	N/A
34	"	4th Guards Army	N/U	180	N/U	12	15.00	Jul-44	Jul-44	N/A	FOOT	N/A
35	"	3rd Guards Army	N/U	110	N/U	10	11.00	Jul-44	Jul-44	N/A	FOOT	N/A
36	"	60th Army	N/U	120	N/U	14	8.57	Jul-44	Jul-44	N/A	FOOT	N/A
37	"	38th Army	N/U	120	N/U	14	8.57	Jul-44	Jul-44	N/A	FOOT	N/A
38	Yassy-Kishiniev	6th Tank Army	N/U	400	N/U	8	50.00	Aug-44	Aug-44	N/A	MOTOR	N/A
39	"	27th Army	N/U	50	N/U	3	16.67	Aug-44	Aug-44	N/A	FOOT	N/A
40	"	52nd Army	N/U	60	N/U	3	20.00	Aug-44	Aug-44	N/A	FOOT	N/A
41	"	37th Army	N/U	120	N/U	7	17.14	Aug-44	Aug-44	N/A	FOOT	N/A
42	Memel (Taurag)	5th Guards Tank Army	N/U	100	N/U	4	25.00	Oct-44	Oct-44	N/A	MOTOR	N/A
43	"	39th Army	N/U	62	N/U	4	15.50	Oct-44	Oct-44	N/A	FOOT	N/A
44	East Prussia	5th Guards Tank Army	N/U	220	N/U	6	36.67	Jan-45	Jan-45	N/A	MOTOR	N/A
45	"	39th Army	N/U	55	N/U	7	7.86	Jan-45	Jan-45	N/A	FOOT	N/A

PART 2 OF 4

SAVKIN

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
46	"	5th Army	N/U	80	N/U	12	6.67	Jan-45	Jan-45	N/A	FOOT	N/A
47	"	28th Army	N/U	75	N/U	13	5.77	Jan-45	Jan-45	N/A	FOOT	N/A
48	"	48th Army	N/U	85	N/U	6	14.17	Jan-45	Jan-45	N/A	FOOT	N/A
49	"	2nd Shock Army	N/U	85	N/U	6	14.17	Jan-45	Jan-45	N/A	FOOT	N/A
50	"	65th Army	N/U	90	N/U	7	12.86	Jan-45	Jan-45	N/A	FOOT	N/A
51	"	3rd Army	N/U	80	N/U	7	11.43	Jan-45	Jan-45	N/A	FOOT	N/A
52	Vistula-Oder	1st Guards Tank Army	N/U	600	N/U	17	35.29	Jan-45	Jan-45	N/A	MOTOR	N/A
53	"	2nd Guards Tank Army	N/U	600	N/U	16	37.50	Jan-45	Jan-45	N/A	MOTOR	N/A
54	"	3rd Guards Tank Army	N/U	420	N/U	16	26.25	Jan-45	Jan-45	N/A	MOTOR	N/A
55	"	4th Tank Army	N/U	375	N/U	13	28.85	Jan-45	Jan-45	N/A	MOTOR	N/A
56	"	5th Shock Army	N/U	140	N/U	6	23.33	Jan-45	Jan-45	N/A	FOOT	N/A
57	"	8th Guards Army	N/U	150	N/U	6	25.00	Jan-45	Jan-45	N/A	FOOT	N/A
58	"	69th Army	N/U	180	N/U	6	30.00	Jan-45	Jan-45	N/A	FOOT	N/A
59	"	13th Army	N/U	125	N/U	7	17.86	Jan-45	Jan-45	N/A	FOOT	N/A
60	"	52nd Army	N/U	125	N/U	8	15.63	Jan-45	Jan-45	N/A	FOOT	N/A
61	"	5th Guards Army	N/U	130	N/U	6	21.67	Jan-45	Jan-45	N/A	FOOT	N/A
62	Berlin	1st Guards Tank Army	N/U	110	N/U	18	6.11	Apr-45	Apr-45	N/A	MOTOR	N/A
63	"	2nd Guards Tank Army	N/U	125	N/U	18	6.94	Apr-45	Apr-45	N/A	MOTOR	N/A
64	"	3rd Guards Tank Army	N/U	190	N/U	17	11.18	Apr-45	Apr-45	N/A	MOTOR	N/A
65	"	4th Guards Tank Army	N/U	220	N/U	17	12.94	Apr-45	Apr-45	N/A	MOTOR	N/A
66	"	3rd Shock Army	N/U	70	N/U	10	7.00	Apr-45	Apr-45	N/A	FOOT	N/A
67	"	5th Shock Army	N/U	70	N/U	10	7.00	Apr-45	Apr-45	N/A	FOOT	N/A
68	"	8th Guards Army	N/U	70	N/U	10	7.00	Apr-45	Apr-45	N/A	FOOT	N/A
69	"	13th Army	N/U	50	N/U	7	7.14	Apr-45	Apr-45	N/A	FOOT	N/A
70	"	3rd Shock Army	N/U	56	N/U	4	14.00	Apr-45	Apr-45	N/A	FOOT	N/A
71	Manchuria/ (Japanese Front)	6th Guards Tank Army	N/U	820	N/U	10	82.00	Aug-45	Aug-45	N/A	MOTOR	N/A
72	"	17th Army	N/U	450	N/U	10	45.00	Aug-45	Aug-45	N/A	FOOT	N/A
73	"	39th Army	N/U	380	N/U	10	38.00	Aug-45	Aug-45	N/A	FOOT	N/A
74	"	36th Army	N/U	450	N/U	10	45.00	Aug-45	Aug-45	N/A	FOOT	N/A
75	(1st Far-Eastern Front)	35th Army	N/U	250	N/U	10	25.00	Aug-45	Aug-45	N/A	FOOT	N/A
76	"	1st Army	N/U	300	N/U	10	30.00	Aug-45	Aug-45	N/A	FOOT	N/A
77	"	5th Army	N/U	300	N/U	10	30.00	Aug-45	Aug-45	N/A	FOOT	N/A
78	"	25th Army	N/U	200	N/U	10	20.00	Aug-45	Aug-45	N/A	FOOT	N/A
79	(2nd Far-Eastern Front)	2nd Army	N/U	200	N/U	10	20.00	Aug-45	Aug-45	N/A	FOOT	N/A
80	"	15th Army	N/U	300	N/U	10	30.00	Aug-45	Aug-45	N/A	FOOT	N/A
81	South-Sakalin	16th Army	N/U	360	N/U	15	24.00	Aug-45	Aug-45	N/A	FOOT	N/A

SAVKIN

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
1	Battle of Moscow	N/A	N/A	Army		
2	"	N/A	N/A	Army		
3	"	N/A	N/A	Army		
4	"	N/A	N/A	Army		
5	"	N/A	N/A	Army		
6	"	N/A	N/A	Army		
7	"	N/A	N/A	Army		
8	Toropeshku-Kholm	N/A	N/A	Army		
9	"	N/A	N/A	Army		
10	Battle on the Volga	N/A	N/A	Army		
11	"	N/A	N/A	Arm"		
12	"	N/A	N/A	Army		
13	"	N/A	N/A	Army		
14	"	N/A	N/A	Army		
15	"	N/A	N/A	Army		
16	Ostrogosk-Rossoshchansk	N/A	N/A	Army		
17	Orlovsk	N/A	N/A	Army		
18	Operations By Minsk R.	N/A	N/A	Army		
19	Belgorod-Kharkov	N/A	N/A	Army		
20	"	N/A	N/A	Army		
21	Chernigov-Prityat	N/A	N/A	Army		
22	Bug-Dnestr	N/A	N/A	Army		40 km on best day
23	"	N/A	N/A	Army		50 km on best day
24	"	N/A	N/A	Army		50 km on best day
25	"	N/A	N/A	Army		50 km on best day
26	Belorussia	N/A	N/A	Army		60 km on best day
27	"	N/A	N/A	Army		
28	"	N/A	N/A	Army		
29	"	N/A	N/A	Army		
30	"	N/A	N/A	Army		
31	"	N/A	N/A	Army		
32	Lvov-Sandomiersk	N/A	N/A	Army		45 km on best day
33	"	N/A	N/A	Army		80 km on best day
34	"	N/A	N/A	Army		30 km on best day
35	"	N/A	N/A	Army		
36	"	N/A	N/A	Army		
37	"	N/A	N/A	Army		
38	Yassy-Kishniev	N/A	N/A	Army		100 km on best day
39	"	N/A	N/A	Army		
40	"	N/A	N/A	Army		
41	"	N/A	N/A	Army		
42	Memel (Taurag)	N/A	N/A	Army		
43	"	N/A	N/A	Army		
44	East Prussia	N/A	N/A	Army		60 km on best day
45	"	N/A	N/A	Army		

PART 4 OF 4

SAVKIN

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS
46	"	N/A	N/A	Army		
47	"	N/A	N/A	Army		
48	"	N/A	N/A	Army		
49	"	N/A	N/A	Army		
50	"	N/A	N/A	Army		
51	"	N/A	N/A	Army		
52	Vistula-Oder	N/A	N/A	Army		80 km on best day
53	"	N/A	N/A	Army		100 km on best day
54	"	N/A	N/A	Army		80 km on best day
55	"	N/A	N/A	Army		70 km on best day
56	"	N/A	N/A	Army		
57	"	N/A	N/A	Army		
58	"	N/A	N/A	Army		
59	"	N/A	N/A	Army		
60	"	N/A	N/A	Army		
61	"	N/A	N/A	Army		
62	Berlin	N/A	N/A	Army		17 km on best day
63	"	N/A	N/A	Army		25 km on best day
64	"	N/A	N/A	Army		40 km on best day
65	"	N/A	N/A	Army		80 km on best day
66	"	N/A	N/A	Army		
67	"	N/A	N/A	Army		
68	"	N/A	N/A	Army		
69	"	N/A	N/A	Army		
70	"	N/A	N/A	Army		
71	Manchuria/	N/A	N/A	Army		160 km on best day
72	(Japanese Front)	N/A	N/A	Army		
73	"	N/A	N/A	Army		
74	"	N/A	N/A	Army		
75	(1st Far-Eastern Front)	N/A	N/A	Army		
76	"	N/A	N/A	Army		
77	"	N/A	N/A	Army		
78	"	N/A	N/A	Army		
79	(2nd Far-Eastern Front)	N/A	N/A	Army		
80	"	N/A	N/A	Army		
81	South-Sakalin	N/A	N/A	Army		

SIEGFRIE

1. Data Source:

- a. Title: Rates of Advance in Infantry Division Attacks in the Normandy-Northern France and Siegfried Line Campaigns
- b. Author: Wainstein, Leonard
- c. Date: December 1973
- d. Organization: Institute for Defense Analyses, 400 Army-Navy Drive, Arlington, VA 22202
- e. Number: Paper P-990
- f. Available from: DTIC AD-779 882

2. Data Description:

a. The SIEGFRIE data are taken from Table 5 (page 17) of the source. The source obtained its information from official US Army histories and available archival records such as Daily Summaries, SITREPS, G1 Journals, etc.

b. (p v, Preface) "The research presented in this paper is in the area of historical combat statistics for possible use as input to simulation models. ... The purpose of this paper is not to attempt to establish precise relationships among the factors of rate of advance, casualties, resistance, and terrain. There is usually insufficient numerical data for that even on a one-sided basis. Rather it is hoped that some general relationships—some proportions—will emerge that will be of use to model-builders."

c. The data consist of a representative sample of 40 attacks in which an advance of at least 300 yards was gained by allied infantry divisions in NW Europe during WWII. Of these, 35 are from the American attack on the Siegfried Line between 11 September and 16 December 1944, and 5 are from the final US counterattack phase of the Ardennes campaign (January of 1945). An indication of the terrain, degree of resistance, Allied strength, and battle casualties is included.

d. (p 1) "It should be stressed that many attacks fail to gain any ground, and these 90 advances were chosen because they did show an advance. Later, the approximate percent of all attacks in which advances occurred is determined." (p 15) "... I have arbitrarily considered that advances of under 300 yards represented no advance."

e. Distance is not defined, but presumably is FEBA displacement.

f. The time interval is defined as (p 10) "For simplicity's sake, a single day has been established as the base unit, despite the fact that in nearly every case the action lasted less than a full day and, for most actions, even less than the daylight period of the day. The purpose of the study is not to determine rates of advance on an hourly basis, but rather to determine the scale of the forward movement achieved in a good-sized sample."

g. (p 1) "Only bald statistics are presented, since, for purposes of statistical analysis and simulation, descriptive text on each battle really contributes little beyond some additional understanding of factors that cannot be quantified."

h. (p 5) "Terrain has been categorized as (1) open, (2) mixed, and (3) close or difficult. The word mixed thus includes the two commonly used descriptors, moderately open and moderately close, the distinction between which is really rather fine and

essentially judgmental." (p 8) "... it is generally not possible to distinguish what proportion of an action occurred in a town versus the proportion that occurred on the open ground around it."

i. (pp 8-9, *passim*) "In the absence of German strength figures comparable to those obtainable for US units, degree of resistance rather than force ratio or enemy posture has been used as the descriptor for the enemy. ... The degree of enemy entrenchment—fortified position, prepared position, etc.—is not the best descriptor, since it is the fighting spirit of resistance maintained by the troops, as much as the strength of their position, that ultimately determines degree of resistance. ... In the Normandy cases, three simple categories of resistance are used: heavy, moderate, and light. For the Siegfried Line cases, five categories are used because the records employed a further breakdown of descriptor: heavy, moderate to heavy, moderate, light to moderate, and light. ... The descriptor terms are those generally used in reference to the actions in the official histories. Yet in several cases the term used does not appear to accord with the casualties suffered. ... It is obvious that no standard measure exists for the relationship between degree of resistance and casualties ..."

j. (p 10) "While the actions listed all involved a single division, it should be understood that the entire division was not always involved. Attacks involving two or three regiments were most common, while single regiment attacks are also included, since they did represent an effort mounted by a division in which the division artillery and tank units invariably participated. There are also included cases where all three regiments or brigades attacked simultaneously, but divisional attacks using only a portion of the division were the norm. Battle really was a contest between regimental-sized units with their supporting elements."

k. (p 15) Based on "a hasty search," for the Normandy-Northern France area, 40 out of 371 division attack days showed "no" advance (i.e., advances of less than 300 yards). (p 20) For the Siegfried Line area, 17 out of 137 division attack days showed "no" advance.

l. (p 21) "The variations (in Tables 4 and 8) relating terrain type to degree of resistance are so marked that any average [relating rate of advance to degree of resistance] is highly questionable." Apparently Wainstein is here referring to the marked tendency for "heavy" resistance and "close" terrain to occur together. The combined cross-tabulation for all the data in this report is as follows, where we have collapsed the Siegfried Line resistance categories to three:

Terrain Class	Degree of Resistance			Total
	Heavy	Moderate	Light	
Open	4	0	9	13
Mixed	13	17	14	44
Close	22	8	3	33
Total	39	25	26	90

3. Discussion and Comments:

a. The source table gives advances as "Actual or Daily Average of Advance." These we first converted into total distance advanced by multiplying by the duration of the action in days, and then into an average rate of advance per day by dividing by the number of days. The author's accompanying discussion of the quality of the data is sound and suggests the care with which these data were assembled. However, in statistical terms they are a "convenience sample," and not necessarily a random one.

b. The limitation to advances of 300 yards or more is arbitrary and unfortunate. Also, it would have been better had the source given at least a general description of the portion of the division actually participating in the attacks.

c. The association between degree of resistance and terrain reinforces the suspicion that there is a pervasive systematic connection here—possibly due to the defender's tendency whenever possible to select "close/difficult" terrain for his most determined stands. An alternative is to postulate that attackers tend to perceive the resistance as heavy when the terrain is "close," i.e., that the association is caused by the vicious circle alluded to elsewhere. However, the latter postulate does imply a lack of professional objectivity in the attacker's perception of the situation that we are loathe to presume without good cause, although it is well-known that even professionals can be victimized by such misperceptions from time to time.

d. In some cases, the original data table's dates spanned by the action are inconsistent with its durations in days. In such cases, we assumed that the dates were accurate and adjusted the durations accordingly. Note that some of the strength values in the original table were estimated, and that in one case the battle casualties are not for the same period as for the advance.

4. Data Table Notes: These advances are presumably by forces that were heavily engaged.

PART 1 OF 2

SIEGFRIE

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (YARDS)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP'N INTENS	MODE OF MOVEMENT	TOPOGRAPHY
1	30th ID	Geilenkirchen	5000	4.57	NU	1	4.57	19-Sep-44	19-Sep-44	Lite	Foot	Mixed
2	30th ID	Alsdorf	3500	3.20	NU	1	3.20	07-Oct-44	07-Oct-44	Lite	Foot	Mixed
3	1st ID	Murselen	1000	0.91	NU	1	0.91	09-Oct-44	09-Oct-44	Heavy	Foot	Mixed
4	1st ID	Verlauteheide	800	0.73	NU	1	0.73	08-Oct-44	08-Oct-44	Heavy	Foot	Mixed
5	30th ID	Alsdorf	1500	1.37	NU	1	1.37	08-Oct-44	08-Oct-44	Med-Hvy	Foot	Mixed
6	30th ID	Bardenburg	2000	1.83	NU	1	1.83	09-Oct-44	09-Oct-44	Medium	Foot	Mixed
7	28th ID	Schmidt	1500	1.37	NU	1	1.37	02-Nov-44	02-Nov-44	Medium	Foot	Close
8	28th ID	Schmidt	5500	5.03	NU	1	5.03	03-Nov-44	03-Nov-44	Med-Lt	Foot	Close
9	28th ID	Vossenach	2500	2.29	NU	1	2.29	10-Nov-44	10-Nov-44	Heavy	Foot	Close
10	104th ID	Verlauteheide	1400	1.28	NU	1	1.28	16-Nov-44	16-Nov-44	Heavy	Foot	Mixed
11	1st ID	Schenehutte	1000	0.91	NU	1	0.91	17-Nov-44	17-Nov-44	Med-Hvy	Foot	Close
12	30th ID	Murselen	1800	1.65	NU	1	1.65	16-Nov-44	16-Nov-44	Lite	Foot	Open
13	4th ID	Grosshau	1000	0.91	NU	1	0.91	18-Nov-44	18-Nov-44	Heavy	Foot	Close
14	104th ID	Eschweiler	2500	2.29	NU	1	2.29	19-Nov-44	19-Nov-44	Med-Lt	Foot	Mixed
15	104th ID	Eschweiler	2000	1.83	NU	1	1.83	22-Nov-44	22-Nov-44	Med-Lt	Foot	Mixed
16	4th ID	Weisser Weh Creek	2500	2.29	NU	5	0.46	16-Nov-44	20-Nov-44	Heavy	Foot	Close
17	8th ID	Huertgen	500	0.46	NU	1	0.46	21-Nov-44	21-Nov-44	Heavy	Foot	Close
18	8th ID	Huertgen	400	0.37	NU	1	0.37	16-Nov-44	16-Nov-44	Heavy	Foot	Close
19	4th ID	Schevenhutte	600	0.55	NU	1	0.55	22-Nov-44	22-Nov-44	Med-Hvy	Foot	Close
20	4th ID	Schevenhutte	600	0.55	NU	1	0.55	23-Nov-44	23-Nov-44	Heavy	Foot	Close
21	4th ID	Wenau Forest	800	0.73	NU	1	0.73	25-Nov-44	25-Nov-44	Heavy	Foot	Close
22	104th ID	Inden	2000	1.83	NU	1	1.83	28-Nov-44	28-Nov-44	Heavy	Foot	Close
23	4th ID	Grosshau	800	0.73	NU	1	0.73	27-Nov-44	27-Nov-44	Heavy	Foot	Close
24	1st ID	Schevenhutte	1000	0.91	NU	1	0.91	28-Nov-44	28-Nov-44	Lite	Foot	Mixed
25	8th ID	Huertgen	800	0.73	NU	1	0.73	27-Nov-44	27-Nov-44	Heavy	Foot	Close
26	1st ID	Huertgen	500	0.46	NU	1	0.46	17-Nov-44	17-Nov-44	Med-Hvy	Foot	Close
27	8th ID	Bergstein	1000	0.91	NU	1	0.91	03-Dec-44	03-Dec-44	Medium	Foot	Mixed
28	84th ID	Roer River	2500	2.29	NU	4	0.57	01-Dec-44	04-Dec-44	Heavy	Foot	Open
29	102nd ID	Roer River	2500	2.29	NU	4	0.57	01-Dec-44	04-Dec-44	Heavy	Foot	Open
30	104th ID	Pier	2000	1.83	NU	1	1.83	10-Dec-44	10-Dec-44	Heavy	Foot	Mixed
31	83rd ID	Gurzenich	3000	2.74	NU	1	2.74	13-Dec-44	13-Dec-44	Medium	Foot	Mixed
32	78th ID	Rollesbroich	2000	1.83	NU	1	1.83	13-Dec-44	13-Dec-44	Lite	Foot	Open
33	2nd ID	Arenburg	3000	2.74	NU	1	2.74	13-Dec-44	13-Dec-44	Lite	Foot	Open
34	99th ID	Arenburg	1200	1.10	NU	1	1.10	13-Dec-44	13-Dec-44	Lite	Foot	Open
35	83rd ID	Berzbuir	700	0.64	NU	1	0.64	15-Dec-44	15-Dec-44	Heavy	Foot	Mixed
36	82nd ID	Meyerode	6000	5.49	NU	1	5.49	28-Jan-45	28-Jan-45	Lite	Foot	Mixed
37	9th ID	Rohren	5000	4.57	NU	1	4.57	30-Jan-45	30-Jan-45	Lite	Foot	Open
38	2nd ID	Wetzfeld	3000	2.74	NU	1	2.74	30-Jan-45	30-Jan-45	Lite	Foot	Open
39	1st ID	Honsfeld	4800	4.39	NU	1	4.39	30-Jan-45	30-Jan-45	Lite	Foot	Open
40	2nd ID	Schonesseiffen	6800	6.22	NU	1	6.22	02-Feb-45	02-Feb-45	Lite	Foot	Open

SIEGFRIE

NO.	OPERATION NAME/PHASE	VEGETATION	FOOTING	FORCE SIZE	NOTES	COMMENTS	BATTLE CASUALTIES
1	30th ID	NA	NA	13,952			44
2	30th ID	NA	NA	13,049			132
3	1st ID	NA	NA	13,834			130
4	1st ID	NA	NA	14,187			98
5	30th ID	NA	NA	12,922			124
6	30th ID	NA	NA	13,221			138
7	28th ID	Forest	NA	12,661			230
8	28th ID	Forest	NA	13,833			252
9	28th ID	Forest	NA	13,663			972
10	104th ID	NA	NA	14,298			93
11	1st ID	Forest	NA	14,113			164
12	30th ID	NA	NA	14,144			158
13	4th ID	Forest	NA	14,365			336
14	104th ID	NA	NA	13,981			197
15	104th ID	NA	NA	13,998			72
16	4th ID	Forest	NA	14,101			1433
17	8th ID	Forest	NA	13,978			38
18	8th ID	Forest	NA	13,509			290
19	4th ID	Forest	NA	13,759			267
20	4th ID	Forest	NA	13,884			322
21	4th ID	Forest	NA	13,594			183
22	104th ID	Forest	NA	14,153			79
23	4th ID	NA	NA	13,859			213
24	1st ID	Forest	NA	13,937			107
25	8th ID	NA	NA	13,597			46
26	1st ID	Forest	NA	13,967			265
27	8th ID	NA	NA	12,830			136
28	84th ID	NA	NA	13,459			1001
29	102nd ID	NA	NA	13,346			991
30	104th ID	NA	NA	13,356			115
31	83rd ID	NA	NA	13,017			337
32	78th ID	NA	NA	13,868			63
33	2nd ID	NA	NA	14,137			138
34	99th ID	NA	NA	13,676			90
35	83rd ID	NA	NA	12,485			251
36	82nd ID	NA	NA	9,618			26
37	9th ID	NA	NA	14,144			43
38	2nd ID	NA	NA	13,884			63
39	1st ID	NA	NA	13,863			73
40	2nd ID	NA	NA	13,702			192

WAINSTEI

1. Data Source:

- a. Title: Major Front Movements and the Role of Armored Forces
- b. Author: Wainstein, Leonard
- c. Date: June 1984
- d. Organization: Institute for Defense Analyses, 400 Army-Navy Drive, Arlington, VA 22202
- e. Number: IDA Paper P-1784
- f. Available from: IDA

2. Data Description:

a. The WAINSTEI data are taken from Tables II-1, II-4, II-5, II-6, II-7, II-8, II-9, II-10, II-11, II-12, II-13, II-15, IV-2, and IV-3 of the source. The source obtained its information from a variety of documents, but for the most part unit histories and other official and quasi-official histories, supplemented by books, articles and reports by reputable military historians.

b. (p S-1, Summary) "This study examines major campaigns from 1939 to 1973 in order to determine how fast armies have moved and specifically the armored components of them. It has also tried to illustrate some of the factors that influence the advance of armored formations." (p I-1, Introduction) "An examination was undertaken of the Second World War, Korea, Vietnam, the Indo-Pakistan clashes of 1965 and 1971, and the Arab-Israeli wars of 1956, 1967, and 1973 in order to determine what lessons in these armored operations could provide insights for the future."

c. Distance is defined as the maximum front movement. (p II-1) "Nevertheless, it should be stressed that measurement of map distances with dividers is obviously a form of macro-measurement. There can be no claim to precision but, on the other hand, the distances are reasonably accurate. Because the even 'smoothed' FEBA exists only in the model builder's imagination, it often becomes difficult to decide the point of maximum forward movement. Some degree of judgment by the analyst has therefore been necessary." (p II-18) "It is often unclear, too, how much of a force has reached the utmost point of penetration. 'Elements of ...' is the expression commonly found and this could have been a tiny reconnaissance unit."

d. Situational descriptors are defined as follows: (p II-1) "Each campaign is described in terms of date, duration, maximum front movement, and average miles per day from start point to the point of maximum penetration. The phasing of individual campaigns is also to some degree artificial, but the source texts present them in this fashion." Occasional (but rather general) remarks about the nature of the terrain, bottlenecks, degree of opposition, etc. are provided in the accompanying discussion.

3. Discussion and Comments:

a. The source data are voluminous and include information apparently not available elsewhere. However, they contain a large number of obvious typographical errors. Also, the time intervals very often are in error. To the extent that we were able to recognize such errors, we corrected them, but it is possible that not all were found.

b. The source gives two separate tables for Eastern Front campaigns. The source's Table II-11 is based on The West Point Atlas of American Wars, and its Table II-12 is based on Ziemke's book. This is because (p II-24) "[With regard to information

in The West Point Atlas of American Wars and in Ziemke, Earl F., Army Historical Series, 'Stalingrad to Berlin: The German Defeat in the East,' Office of Chief of Military History, Dept. of the Army, Washington, DC, 1968] Where they overlap in time ... the data are noticeably different. However, both are reliable sources and no attempt at reconciliation of the data will be attempted." We have not attempted to resolve the differences either, but have given both in our data base. Users are cautioned not to double-count these actions.

c. The source, on pp II-30 to II-34, provides a very informative discussion of the Soviet WWII Manchurian campaign. In particular it points out that the Japanese forces were "little more than a hollow shell," outnumbered by 416,000 to 72,000 in terms of troops in combat units, with half the authorized number of machineguns and no antitank weapons, and short of artillery and ammunition. The whole campaign was conducted after the atomic bombing of Hiroshima (6 August) and Nagasaki (9 August). "The Sixth Guards Tank Army met no resistance at all for the first four days [9-13 August 1945] and virtually none in the whole campaign. The two mechanized corps [accompanying it] used extended march order, each in six to eight parallel columns. ... Japanese forces had begun to surrender on 15 August in response to the Emperor's declaration of the war's end. The Soviets for obvious political purposes refused to accept the 15 August surrender, thereby continuing their advance to reach their set territorial objectives, ... They accepted only the 2 September surrender in Tokyo harbor." The analysis of rates of advance in the Soviet Manchurian campaign should take into consideration its special circumstances.

d. The source's Table III-1 and Table III-2 were taken from and duplicate information available in Andrews' paper (see our data base ANDREWS). The source's Tables V-1 and V-2 were taken from the ORALFORE report and add nothing to our data base ORALFORE.

e. The source's Figure II-1 gives information from the US Strategic Bombing Survey (Vol 64A, "The Impact of the Allied War Effort on German Logistics") for "Representative German Divisinal Moves to Cherbourg Peninsula" in response to the Allied landings. These data are given in tabular form below. In each case, the first segment of the move was by rail and the last by road.

From	No. of divisions moved	Rail segment		Road segment	
		Avg. dist. (mi)	Avg. rate (mi/day)	Avg. dist. (mi)	Avg. rate (mi/day)
North	4	295	67	142	22
East	2	1100	210	200	34
Southeast	1	600	50	150	19
South	5	485	94	133	23
West	7	120	60	114	22
Wgt'd avg	3.80	381.3	85.7	135.8	23.4

4. Data Table Notes:

a. The source's table number from which the data were taken is given in the last column of our data base.

b. Some of these advances were by forces that were heavily engaged, some by forces that were lightly engaged, and some by forces that were making an administrative march in secure areas behind friendly lines with almost total friendly control of the air.

PART 1 OF 12

WAINSTEI

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2
1	GERMAN OFFENSIVE	POLAND, PHASE I	80	128.75	5	5	25.75	01-Sep-39	05-Sep-39
2	GERMAN OFFENSIVE	POLAND, PHASE II, AXIS 1	160	257.50	9	9	28.61	06-Sep-39	14-Sep-39
3	GERMAN OFFENSIVE	POLAND, PHASE II, AXIS 2	70	112.65	9	9	12.52	06-Sep-39	14-Sep-39
4	GERMAN OFFENSIVE	FLANDERS	115	185.07	7	7	26.44	10-May-40	16-May-40
5	GERMAN OFFENSIVE	FLANDERS	115	185.07	6	6	30.85	16-May-40	21-May-40
6	GERMAN OFFENSIVE	FLANDERS	55	88.51	15	15	5.90	21-May-40	04-Jun-40
7	GERMAN OFFENSIVE	FRANCE	75	120.70	9	9	13.41	04-Jun-40	12-Jun-40
8	GERMAN OFFENSIVE	FRANCE	150	241.40	5	5	48.28	13-Jun-40	17-Jun-40
9	GERMAN OFFENSIVE	YUGOSLAVIA, CAPTURE OF BELGRADE	180	289.68	7	7	41.38	06-Apr-41	12-Apr-41
10	GERMAN OFFENSIVE	GREECE, TO CAPTURE OF ATHENS	280	450.62	22	22	20.48	06-Apr-41	27-Apr-41
11	JAPANESE OFFENSIVE	MALAYA, ATTACK AXIS 1	350	563.27	55	55	10.24	08-Dec-41	31-Jan-42
12	JAPANESE OFFENSIVE	MALAYA, ATTACK AXIS 2	475	764.44	55	55	13.90	08-Dec-41	31-Jan-42
13	ALLIED LANDING	NORMANDY, EXPANDING THE BEACHHEAD	10	16.09	24	24	0.67	01-Jul-44	24-Jul-44
14	ALLIED OFFENSIVE	NORMANDY, BRITISH ATTACK AT CAEN	6	9.66	4	4	2.41	18-Jul-44	21-Jul-44
15	ALLIED OFFENSIVE	NORMANDY, ST. LO BREAKTHROUGH	45	72.42	7	7	10.35	25-Jul-44	31-Jul-44
16	ALLIED OFFENSIVE	NORMANDY, BREAKOUT	180	289.68	13	13	22.28	01-Aug-44	13-Aug-44
17	ALLIED OFFENSIVE	FRANCE, EXPLOITATION	170	273.59	12	12	22.80	14-Aug-44	25-Aug-44
18	ALLIED OFFENSIVE	NW EUROPE, PURSUIT TO THE WEST WALL	225	362.10	20	20	18.11	26-Aug-44	14-Sep-44
19	ALLIED OFFENSIVE	ANVIL, SOUTHERN FRANCE	150	241.40	14	14	17.24	15-Aug-44	28-Aug-44
20	ALLIED OFFENSIVE	FRANCE, 21ST ARMY GROUP OPERATIONS	50	80.47	92	92	0.87	15-Sep-44	15-Dec-44
21	ALLIED OFFENSIVE	6TH AND 12TH ARMY GROUP OPERATIONS	25	40.23	54	54	0.75	15-Sep-44	07-Nov-44
22	FRANCE	ARDENNES BULGE	70	112.65	38	38	2.96	08-Nov-44	15-Dec-44
23	GERMAN OFFENSIVE	ARDENNES BULGE	55	88.51	10	10	8.85	16-Dec-44	25-Dec-44
24	ALLIED COUNTEROFFENSIVE	ARDENNES BULGE	35	56.33	22	22	2.56	26-Dec-44	16-Jan-45
25	ALLIED COUNTEROFFENSIVE	ARDENNES BULGE	15	24.14	22	22	1.10	17-Jan-45	07-Feb-45
26	GERMAN OFFENSIVE	ALSACE-LORRAINE	22	35.41	30	30	1.18	01-Jan-45	30-Jan-45
27	RHINELAND	RHINELAND CAMPAIGN	40	64.37	26	26	2.48	08-Feb-45	05-Mar-45
28	RHINELAND	RHINELAND CAMPAIGN	50	80.47	5	5	16.09	06-Mar-45	10-Mar-45
29	RHINELAND	RHINELAND CAMPAIGN	85	136.79	11	11	12.44	11-Mar-45	21-Mar-45
30	RHINELAND	CROSSING THE RHINE	70	112.65	7	7	16.09	22-Mar-45	28-Mar-45
31	GERMANY	ENCIRCLING THE RUHR	90	144.84	7	7	20.69	29-Mar-45	04-Apr-45
32	GERMANY	REDUCTION OF RUHR POCKET	165	265.54	14	14	18.97	05-Apr-45	18-Apr-45
33	GERMANY	FINAL OPERATIONS	200	321.87	19	19	16.94	19-Apr-45	07-May-45
34	ADMINISTRATIVE MARCH	US 3RD ARMORED DIV	NU	240.00	4	4	60.00	22-Aug-44	25-Aug-44
35	ADMINISTRATIVE MARCH	US 3RD ARMORED DIV	NU	35.00	1	1	35.00	26-Aug-44	26-Aug-44
36	ADMINISTRATIVE MARCH	US 11TH ARMORED DIV	NU	142.00	1	1	142.00	29-Dec-44	29-Dec-44
37	ADMINISTRATIVE MARCH	US 2ND ARMORED DIV	NU	134.00	2	2	67.00	18-Aug-44	19-Aug-44
38	ADMINISTRATIVE MARCH	US 2ND ARMORED DIV	NU	117.00	2	2	58.50	21-Dec-44	22-Dec-44
39	ADMINISTRATIVE MARCH	GER PANZER LEHR DIV	NU	160.00	3	3	53.33	06-Jun-44	08-Jun-44
40	ADMINISTRATIVE MARCH	GER 12TH SS PANZER DIV	NU	125.00	2	2	62.50	06-Jun-44	07-Jun-44
41	ADMINISTRATIVE MARCH	GER 21ST PANZER DIV	NU	34.00	1	1	34.00	30-Jul-44	30-Jul-44
42	ADMINISTRATIVE MARCH	US 10TH ARMORED DIV	NU	115.00	1	1	115.00	07-Apr-45	07-Apr-45
43	DIVISION ADVANCES	US 2ND ARMORED DIV	80	128.75	2	2	64.37	18-Aug-44	19-Aug-44
44	DIVISION ADVANCES	US 2ND ARMORED DIV	95	152.89	7	7	21.84	20-Aug-44	26-Aug-44
45	DIVISION ADVANCES	US 2ND ARMORED DIV	9	14.48	1	1	14.48	21-Aug-44	21-Aug-44

WAINSTEI

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2
46	DIVISION ADVANCES	US 2ND ARMORED DIV	9	14.48	1	1	14.48	22-Aug-44	22-Aug-44
47	DIVISION ADVANCES	US 2ND ARMORED DIV	20	32.19	1	1	32.19	23-Aug-44	23-Aug-44
48	DIVISION ADVANCES	US 2ND ARMORED DIV	60	96.56	3	3	32.19	29-Aug-44	31-Aug-44
49	DIVISION ADVANCES	US 2ND ARMORED DIV	145	233.35	5	5	46.67	01-Sep-44	05-Sep-44
50	DIVISION ADVANCES	US 2ND ARMORED DIV	60	96.56	2	2	48.28	04-Sep-44	05-Sep-44
51	DIVISION ADVANCES	US 2ND ARMORED DIV	40	64.37	1	1	64.37	02-Sep-44	02-Sep-44
52	DIVISION ADVANCES	US 2ND ARMORED DIV, AXIS 1	45	72.42	1	1	72.42	06-Sep-44	06-Sep-44
53	DIVISION ADVANCES	US 2ND ARMORED DIV, AXIS 2	70	112.65	1	1	112.65	06-Sep-44	06-Sep-44
54	DIVISION ADVANCES	US 2ND ARMORED DIV	40	64.37	1	1	64.37	08-Sep-44	08-Sep-44
55	DIVISION ADVANCES	US 2ND ARMORED DIV	6	9.66	1	1	9.66	18-Sep-44	18-Sep-44
56	DIVISION ADVANCES	US 2ND ARMORED DIV	3.5	5.63	1	1	5.63	19-Sep-44	19-Sep-44
57	DIVISION ADVANCES	US 2ND ARMORED DIV	7	11.27	6	6	1.88	03-Oct-44	08-Oct-44
58	DIVISION ADVANCES	US 2ND ARMORED DIV	6.5	10.46	30	30	0.35	01-Nov-44	30-Nov-44
59	DIVISION ADVANCES	US 2ND ARMORED DIV	70	112.65	2	2	56.33	21-Dec-44	22-Dec-44
60	DIVISION ADVANCES	US 2ND ARMORED DIV	1.3	2.09	1	1	2.09	03-Jan-45	03-Jan-45
61	DIVISION ADVANCES	US 2ND ARMORED DIV	8	12.87	1	1	12.87	28-Feb-45	28-Feb-45
62	DIVISION ADVANCES	US 2ND ARMORED DIV	240	386.24	14	14	27.59	29-Mar-45	11-Apr-45
63	DIVISION ADVANCES	US 2ND ARMORED DIV	30	48.28	1	1	48.28	04-Apr-45	04-Apr-45
64	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	26	41.84	1	1	41.84	28-Jul-44	28-Jul-44
65	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	9	14.48	1	1	14.48	29-Jul-44	29-Jul-44
66	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	13	20.92	1	1	20.92	30-Jul-44	30-Jul-44
67	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	10	16.09	1	1	16.09	31-Jul-44	31-Jul-44
68	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	28	45.06	1	1	45.06	01-Aug-44	01-Aug-44
69	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	26	41.84	1	1	41.84	02-Aug-44	02-Aug-44
70	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	48	77.25	1	1	77.25	03-Aug-44	03-Aug-44
71	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	47	75.64	2	2	37.82	04-Aug-44	05-Aug-44
72	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	39	62.76	1	1	62.76	06-Aug-44	06-Aug-44
73	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	41	65.98	1	1	65.98	07-Aug-44	07-Aug-44
74	DIVISION MOVEMENTS	US 6TH ARMORED DIV, FRANCE	0	0.00	1	1	0.00	08-Aug-44	08-Aug-44
75	DIVISION MOVEMENTS	US 2ND ARMORED DIV, FRANCE	0	0.00	1	1	0.00	09-Aug-44	09-Aug-44
76	REPRESENTATIVE ADVANCES	US 2ND ARMORED	3	4.83	1	1	4.83	26-Jul-44	26-Jul-44
77	REPRESENTATIVE ADVANCES	US 2ND ARMORED	4	6.44	2	2	3.22	26-Jul-44	27-Jul-44
78	REPRESENTATIVE ADVANCES	BRITISH 12TH ARMORED	7	11.27	1	1	11.27	30-Jul-44	30-Jul-44
79	REPRESENTATIVE ADVANCES	US 4TH ARMORED	25	40.23	3	3	13.41	28-Jul-44	30-Jul-44
80	REPRESENTATIVE ADVANCES	US 6TH ARMORED	58	93.34	5	5	18.67	27-Jul-44	31-Jul-44
81	REPRESENTATIVE ADVANCES	US 3RD ARMORED	2.75	4.43	1	1	4.43	02-Aug-44	02-Aug-44
82	REPRESENTATIVE ADVANCES	US 5TH ARMORED	20	32.19	1	1	32.19	02-Sep-44	02-Sep-44
83	REPRESENTATIVE ADVANCES	US 2ND ARMORED	30	48.28	1	1	48.28	02-Sep-44	02-Sep-44
84	REPRESENTATIVE ADVANCES	US 2ND ARMORED	3	4.83	1	1	4.83	19-Sep-44	19-Sep-44
85	REPRESENTATIVE ADVANCES	BRITISH GUARDS ARMORED	60	96.56	6	6	16.09	17-Sep-44	22-Sep-44
86	REPRESENTATIVE ADVANCES	BRIT 7TH, 11TH & GUARDS ARMORED	250	402.34	6	6	67.06	30-Aug-44	04-Sep-44
87	REPRESENTATIVE ADVANCES	US 2ND & 3RD ARMORED	2	3.22	1	1	3.22	04-Jan-45	04-Jan-45
88	REPRESENTATIVE ADVANCES	US 11TH ARMORED	2	3.22	1	1	3.22	06-Feb-45	06-Feb-45
89	REPRESENTATIVE ADVANCES	US 1ST ARMORED, ITALY	1	1.61	1	1	1.61	23-May-45	23-May-45
90	REPRESENTATIVE ADVANCES	US 1ST ARMORED, ITALY	1	1.61	1	1	1.61	30-May-45	30-May-45

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2
91	CORPS ATTACKS	OVERALL SIEGFRIED LINE CAMPAIGN	3.5	5.63	96	96	0.06	11-Sep-44	15-Dec-44
92	CORPS ATTACKS	APPROACHES TO DUREN	3.5	5.63	7	7	0.80	10-Dec-44	16-Dec-44
93	CORPS ATTACKS	DRIVE TO THE ROER	11	17.70	24	24	0.74	16-Nov-44	09-Dec-44
94	CORPS ATTACKS	HURTGEN FOREST	3.5	5.63	24	24	0.23	16-Nov-44	09-Dec-44
95	CORPS ATTACKS	XIX CORPS BREAK THRU WEST WALL	5	8.05	6	6	1.34	02-Oct-44	07-Oct-44
96	CORPS ATTACKS	VII CORPS BREACHES WEST WALL	7	11.27	18	18	0.63	12-Sep-44	29-Sep-44
97	CORPS ATTACKS	V CORPS ATTACK ON WEST WALL	9	14.48	9	9	1.61	11-Sep-44	19-Sep-44
98	LORRAINE CAMPAIGN	XII CORPS RIGHT WING ADVANCE	20	32.19	12	12	2.68	10-Sep-44	21-Sep-44
99	LORRAINE CAMPAIGN	XII CORPS, ADVANCE ON LEFT	18	28.97	7	7	4.14	07-Sep-44	13-Sep-44
100	SICILY	SICILY	25	40.23	6	6	6.71	10-Jul-43	15-Jul-43
101	SICILY	SICILY	80	128.75	9	9	14.31	15-Jul-43	23-Jul-43
102	SICILY	SICILY	85	136.79	26	26	5.26	23-Jul-43	17-Aug-43
103	ITALY	THE WINTER LINE	35	56.33	35	35	1.61	12-Oct-43	15-Nov-43
104	ITALY	THE WINTER LINE	17	27.36	58	58	0.47	19-Nov-43	15-Jan-44
105	ITALY	DRIVE TO THE RAPIDO RIVER	8	12.87	11	11	1.17	05-Jan-44	15-Jan-44
106	ITALY	CASSINO CAMPAIGN	8	12.87	75	75	0.17	17-Jan-44	31-Mar-44
107	ITALY	ROME CAMPAIGN	80	128.75	26	26	4.95	11-May-44	05-Jun-44
108	ITALY	THE GOTHIC LINE	75	120.70	143	143	0.84	26-Aug-44	15-Jan-45
109	ITALY	SPRING OFFENSIVE	20	32.19	19	19	1.69	02-Apr-45	20-Apr-45
110	ITALY	EXPLOITATION TO THE PO RIVER	55	88.51	4	4	22.13	20-Apr-45	23-Apr-45
111	EASTERN FRONT	GERMAN OFFENSIVE	400	643.74	25	25	25.75	22-Jun-41	16-Jul-41
112	EASTERN FRONT	GERMAN OFFENSIVE	300	482.80	47	47	10.27	17-Jul-41	01-Sep-41
113	EASTERN FRONT	GERMAN OFFENSIVE	150	241.40	30	30	8.05	02-Sep-41	01-Oct-41
114	EASTERN FRONT	GERMAN OFFENSIVE	175	281.64	14	14	20.12	02-Oct-41	15-Oct-41
115	EASTERN FRONT	GERMAN OFFENSIVE	80	128.75	31	31	4.15	16-Oct-41	15-Nov-41
116	EASTERN FRONT	GERMAN OFFENSIVE	75	120.70	21	21	5.75	15-Nov-41	05-Dec-41
117	EASTERN FRONT	SOVIET WINTER COUNTEROFFENSIVE	215	346.01	153	153	2.26	06-Dec-41	07-May-42
118	EASTERN FRONT	GERMAN SUMMER OFFENSIVE	200	321.87	25	25	12.87	28-Jun-42	22-Jul-42
119	EASTERN FRONT	GERMAN SUMMER OFFENSIVE	325	523.04	32	32	16.34	23-Jul-42	23-Aug-42
120	EASTERN FRONT	RUSSIAN OFFENSIVE, STALINGRAD	150	241.40	44	44	5.49	19-Nov-42	01-Jan-43
121	EASTERN FRONT	RUSSIAN OFFENSIVE	250	402.34	31	31	12.98	02-Jan-43	01-Feb-43
122	EASTERN FRONT	RUSSIAN OFFENSIVE	140	225.31	153	153	1.47	02-Feb-43	04-Jul-43
123	EASTERN FRONT	RUSSIAN OFFENSIVE	100	160.93	59	59	2.73	05-Jul-43	01-Sep-43
124	EASTERN FRONT	GERMAN OFFENSIVE, KURSK	25	40.23	9	9	4.47	05-Jul-43	13-Jul-43
125	EASTERN FRONT	RUSSIAN OFFENSIVE	225	362.10	90	90	4.02	02-Sep-43	30-Nov-43
126	EASTERN FRONT	RUSSIAN WINTER OFFENSIVE	100	160.93	45	45	3.58	01-Dec-43	14-Jan-44
127	EASTERN FRONT	RUSSIAN WINTER OFFENSIVE	125	201.17	47	47	4.28	15-Jan-44	01-Mar-44
128	EASTERN FRONT	RUSSIAN WINTER OFFENSIVE	100	160.93	113	113	1.42	02-Mar-44	22-Jun-44
129	EASTERN FRONT	RUSSIAN SUMMER OFFENSIVE	275	442.57	46	46	9.62	23-Jun-44	07-Aug-44
130	EASTERN FRONT	RUSSIAN SUMMER OFFENSIVE	300	482.80	38	38	12.71	08-Aug-44	14-Sep-44
131	EASTERN FRONT	RUSSIAN SUMMER OFFENSIVE	200	321.87	92	92	3.50	15-Sep-44	15-Dec-44
132	EASTERN FRONT	RUSSIAN SUMMER OFFENSIVE	300	482.80	33	33	14.63	14-Jan-45	15-Feb-45
133	EASTERN FRONT	RUSSIAN WINTER OFFENSIVE	100	160.93	59	59	2.73	16-Feb-45	15-Apr-45
134	EASTERN FRONT	RUSSIAN WINTER OFFENSIVE	110	177.03	22	22	8.05	16-Apr-45	07-May-45
135	EASTERN FRONT	FINAL RUSSIAN CAMPAIGN	70	112.65	36	36	3.13	19-Nov-42	24-Dec-42
		SOVIET OFFENSIVE AT STALINGRAD							

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136	EASTERN FRONT	SOVIET OFFENSIVE AGAINST ROSTOV	120	193.12	35	35	5.52	16-Dec-42	19-Jan-43
137	EASTERN FRONT	SOVIET OFFENSIVE IN SOUTH	170	273.59	31	31	8.83	19-Jan-43	18-Feb-43
138	EASTERN FRONT	SOVIET OFFENSIVE IN SOUTH	160	257.50	20	20	12.87	30-Jan-43	18-Feb-43
139	EASTERN FRONT	GERMAN COUNTEROFFENSIVE	80	128.75	28	28	4.60	19-Feb-43	18-Mar-43
140	EASTERN FRONT	SOVIET COUNTEROFFENSIVE AT KURSK	90	144.84	38	38	3.81	12-Jul-43	18-Aug-43
141	EASTERN FRONT	FOURTH BATTLE OF KHARKOV	180	289.68	25	25	11.59	03-Aug-43	27-Aug-43
142	EASTERN FRONT	SOVIET ADVANCE TO THE DNEPR	180	289.68	46	46	6.30	18-Aug-43	02-Oct-43
143	EASTERN FRONT	BATTLE FOR THE DNEPR LINE	60	96.56	81	81	1.19	02-Oct-43	21-Dec-43
144	EASTERN FRONT	THE DNEPR BRIDGEHEAD	70	112.65	87	87	1.29	01-Oct-43	26-Dec-43
145	EASTERN FRONT	SOVIET BREAKTHROUGH AT NEVEL	50	80.47	105	105	0.77	06-Oct-43	18-Jan-44
146	EASTERN FRONT	SOVIET OFFENSIVE WEST OF KIEV	90	144.84	39	39	3.71	24-Dec-43	31-Jan-44
147	EASTERN FRONT	THE NIKOPOL BRIDGEHEAD & KRIVOI ROG	85	136.79	51	51	2.68	10-Jan-44	29-Feb-44
148	EASTERN FRONT	SOVIET WINTER OFFENSIVE, NORTH FLANK	140	225.31	78	78	2.89	14-Jan-44	31-Mar-44
149	EASTERN FRONT	SOVIET SUMMER OFFENSIVE, FINLAND	90	144.84	22	22	6.58	19-Jun-44	10-Jul-44
150	EASTERN FRONT	BATTLE FOR BELORUSSIA	160	257.50	27	27	9.54	22-Jun-44	18-Jul-44
151	EASTERN FRONT	SOVIET OFFENSIVE IN NORTH UKRAINE	180	289.68	64	64	4.53	14-Jul-44	15-Sep-44
152	EASTERN FRONT	SOVIET OFFENSIVE AGAINST NORTH FLANK	120	193.12	45	45	4.29	18-Jul-44	31-Aug-44
153	EASTERN FRONT	SOVIET OFFENSIVE	140	225.31	25	25	9.01	05-Oct-44	29-Oct-44
154	EASTERN FRONT	SOVIET OFFENSIVE	60	96.56	63	63	1.53	29-Oct-44	30-Dec-44
155	EASTERN FRONT	SOVIET OFFENSIVE	55	88.51	22	22	4.02	07-Oct-44	28-Oct-44
156	EASTERN FRONT	OFFENSIVE AGAINST ARMY GROUPS NORTH	280	450.62	19	19	23.72	13-Jan-45	31-Jan-45
157	EASTERN FRONT	CLOSING IN ON THE BALTIC	60	96.56	35	35	2.76	24-Feb-45	30-Mar-45
158	EASTERN FRONT	VIENNA OFFENSIVE	140	225.31	42	42	5.36	05-Mar-45	15-Apr-45
159	KOREA	NORTH KOREAN ATTACK ACROSS DMZ	250	402.34	42	42	9.58	25-Jun-50	05-Aug-50
160	KOREA	NORTH KOREAN OFFENSIVE AGAINST PUSAN	70	112.65	22	22	5.12	05-Aug-50	26-Aug-50
161	KOREA	NORTH KOREAN OFFENSIVE AGAINST PUSAN	20	32.19	15	15	2.15	27-Aug-50	10-Sep-50
162	KOREA	US AMPHIBIOUS ASSAULT AT INCHON	25	40.23	12	12	3.35	15-Sep-50	26-Sep-50
163	KOREA	UN OFFENSIVE FROM PUSAN PERIMETER	125	201.17	12	12	16.76	15-Sep-50	26-Sep-50
164	KOREA	UN ADVANCE TO MANCHURIA	220	354.06	20	20	17.70	07-Oct-50	26-Oct-50
165	KOREA	CHINESE OFFENSIVE IN NORTH KOREA	315	506.94	22	22	23.04	24-Nov-50	15-Dec-50
166	KOREA	CHINESE OFFENSIVE IN NORTH KOREA	135	217.26	22	22	9.88	24-Nov-50	15-Dec-50
167	KOREA	SECOND INVASION OF SOUTH KOREA	75	120.70	25	25	4.83	31-Dec-50	24-Jan-51
168	KOREA	UN COUNTEROFFENSIVE	90	144.84	88	88	1.65	25-Jan-51	22-Apr-51
169	KOREA	COMMUNIST SPRING OFFENSIVE, PHASE 1	35	56.33	10	10	5.63	21-Apr-51	30-Apr-51
170	KOREA	COMMUNIST SPRING OFFENSIVE, PHASE 2	20	32.19	7	7	4.60	14-May-51	20-May-51
171	KOREA	UN OFFENSIVES	60	96.56	24	24	4.02	23-May-51	15-Jun-51
172	FRANCO-PRUSSIAN WAR	GERMAN INVASION OF FRANCE	240	386.24	45	45	8.58	04-Aug-70	17-Sep-70
173	WORLD WAR I	ADVANCE INTO BELGIUM AND FRANCE	270	434.52	34	34	12.78	03-Aug-14	05-Sep-14
174	WORLD WAR I	ADVANCE INTO BELGIUM AND FRANCE	180	289.68	34	34	8.52	03-Aug-14	05-Sep-14
175	WORLD WAR I	AUSTRO-GERMAN ADVANCE	80	128.75	20	20	6.44	24-Oct-17	12-Nov-17
176	WORLD WAR I	GERMAN ATTACK ON BRITISH FRONT	40	64.37	15	15	4.29	21-Mar-18	04-Apr-18
177	ARAB-ISRAELI, 1967	CONQUEST OF SINAI, TO ISMAILIA	150	241.40	4	4	60.35	05-Jun-67	08-Jun-67
178	ARAB-ISRAELI, 1967	SEIZURE OF GOLAN HEIGHTS, TO QUNEITRA	9	14.48	2	2	7.24	09-Jun-67	10-Jun-67
179	ARAB-ISRAELI, 1973	SYRIAN DRIVE INTO GOLAN HEIGHTS	12	19.31	2	2	9.66	06-Oct-73	07-Oct-73
180	ARAB-ISRAELI, 1973	ISRAELI DRIVE INTO SYRIA	27	43.45	4	4	10.86	11-Oct-73	14-Oct-73

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2
181	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	0	0.00	3	3	0.00	05-Jul-44	07-Jul-44
182	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	25	40.23	1	1	40.23	01-Aug-44	01-Aug-44
183	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	36	57.94	2	2	28.97	02-Aug-44	03-Aug-44
184	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	32	51.50	1	1	51.50	08-Aug-44	08-Aug-44
185	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	67	107.83	2	2	53.91	14-Aug-44	15-Aug-44
186	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	73	117.48	1	1	117.48	20-Aug-44	20-Aug-44
187	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	68	109.44	1	1	109.44	25-Aug-44	25-Aug-44
188	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	80	128.75	1	1	128.75	30-Aug-44	30-Aug-44
189	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	99	159.33	1	1	159.33	04-Sep-44	04-Sep-44
190	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	68	109.44	1	1	109.44	15-Sep-44	15-Sep-44
191	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	5	8.05	7	7	1.15	22-Sep-44	28-Sep-44
192	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	60	96.56	1	1	96.56	11-Oct-44	11-Oct-44
193	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	90	144.84	1	1	144.84	28-Dec-44	28-Dec-44
194	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	80	128.75	2	2	64.37	27-Mar-45	28-Mar-45
195	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	85	136.79	1	1	136.79	03-Apr-45	03-Apr-45
196	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	85	136.79	1	1	136.79	11-Apr-45	11-Apr-45
197	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	150	241.40	1	1	241.40	22-Apr-45	22-Apr-45
198	WORLD WAR II	THIRD ARMY HQ MOVES (FORWARD ECHELON)	87	140.01	2	2	70.01	02-May-45	03-May-45
199	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	1	1.61	1	1	1.61	06-Jun-44	NA
200	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	9	14.48	3	3	4.83	08-Jun-44	NA
201	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	9	14.48	6	6	2.41	11-Jun-44	NA
202	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	20	32.19	45	45	0.72	20-Jul-44	NA
203	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	29	46.67	58	58	0.80	02-Aug-44	NA
204	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	44	70.81	64	64	1.11	08-Aug-44	NA
205	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	51	82.08	70	70	1.17	14-Aug-44	NA
206	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	58	93.34	72	72	1.30	16-Aug-44	NA
207	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	122	196.34	73	73	2.69	17-Aug-44	NA
208	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	134	215.65	73	73	2.95	17-Aug-44	NA
209	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	154	247.84	74	74	3.35	18-Aug-44	NA
210	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	235	378.20	79	79	4.79	23-Aug-44	NA
211	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	268	431.30	80	80	5.39	24-Aug-44	NA
212	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	288	463.49	81	81	5.72	25-Aug-44	NA
213	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	302	486.02	82	82	5.93	26-Aug-44	NA
214	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	310	498.90	86	86	5.80	30-Aug-44	NA
215	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	338	543.96	88	88	6.18	01-Sep-44	NA
216	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	360	579.36	89	89	6.51	02-Sep-44	NA
217	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	427	687.19	91	91	7.55	04-Sep-44	NA
218	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	459	738.69	93	93	7.94	06-Sep-44	NA
219	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	501	806.28	96	96	8.40	09-Sep-44	NA
220	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	538	865.83	98	98	8.83	11-Sep-44	NA
221	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	542	872.26	99	99	8.81	12-Sep-44	NA
222	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	565	909.28	102	102	8.91	15-Sep-44	NA
223	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	585	941.47	121	121	7.78	04-Oct-44	NA
224	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	614	988.14	145	145	6.81	28-Oct-44	NA
225	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	624	1004.23	267	267	3.76	27-Feb-45	NA

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NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (DAYS)	RATE (KM/DAY)	START DATE-1	END DATE-2
226	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	652	1049.29	278	278	3.77	10-Mar-45	NA
227	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	680	1094.35	291	291	3.76	23-Mar-45	NA
228	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	711	1144.24	293	293	3.91	25-Mar-45	NA
229	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	761	1224.71	297	297	4.12	29-Mar-45	NA
230	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	821	1321.27	299	299	4.42	31-Mar-45	NA
231	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	875	1408.18	301	301	4.68	02-Apr-45	NA
232	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	915	1472.55	308	308	4.78	09-Apr-45	NA
233	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	940	1512.78	310	310	4.88	11-Apr-45	NA
234	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	1003	1614.17	311	311	5.19	12-Apr-45	NA
235	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	1058	1702.69	314	314	5.42	15-Apr-45	NA
236	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	1188	1911.90	329	329	5.81	30-Apr-45	NA
237	WORLD WAR II	V CORPS COMMAND POST LOCATIONS	1313	2113.07	337	337	6.27	08-May-45	NA

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NO.	OPERATION NAME/PHASE	NOTES	REMARKS	SOURCE TABLE NO.
1	GERMAN OFFENSIVE			11-1
2	GERMAN OFFENSIVE			11-1
3	GERMAN OFFENSIVE			11-1
4	GERMAN OFFENSIVE			11-1
5	GERMAN OFFENSIVE			11-1
6	GERMAN OFFENSIVE			11-1
7	GERMAN OFFENSIVE			11-1
8	GERMAN OFFENSIVE			11-1
9	GERMAN OFFENSIVE			11-1
10	GERMAN OFFENSIVE			11-1
11	JAPANESE OFFENSIVE		EXCLUDING SIEGE OF SINGAPORE	11-1
12	JAPANESE OFFENSIVE		EXCLUDING SIEGE OF SINGAPORE	11-1
13	ALLIED LANDING			11-4
14	ALLIED OFFENSIVE			11-4
15	ALLIED OFFENSIVE			11-4
16	ALLIED OFFENSIVE			11-4
17	ALLIED OFFENSIVE			11-4
18	ALLIED OFFENSIVE			11-4
19	ALLIED OFFENSIVE			11-4
20	ALLIED OFFENSIVE			11-4
21	FRANCE			11-4
22	FRANCE			11-4
23	GERMAN OFFENSIVE			11-4
24	ALLIED COUNTEROFFENSIVE			11-4
25	ALLIED COUNTEROFFENSIVE			11-4
26	GERMAN OFFENSIVE			11-4
27	RHINELAND			11-4
28	RHINELAND			11-4
29	RHINELAND			11-4
30	RHINELAND			11-4
31	GERMANY			11-4
32	GERMANY			11-4
33	GERMANY			11-4
34	ADMINISTRATIVE MARCH	96 HOURS IN TRANSIT		11-5
35	ADMINISTRATIVE MARCH	16 HOURS IN TRANSIT	CROSSING THE SEINE, ADVANCE TO ME	11-5
36	ADMINISTRATIVE MARCH	20 HOURS IN TRANSIT	VERY POOR WEATHER, MOVE TOWARDS BULGE	11-5
37	ADMINISTRATIVE MARCH	48 HOURS IN TRANSIT		11-5
38	ADMINISTRATIVE MARCH	22-23 HOURS IN TRANSIT	VERY POOR WEATHER. TOWARDS BULGE	11-5
39	ADMINISTRATIVE MARCH	48 HOURS IN TRANSIT	UNDER AIR ATTACK. INITIAL ESTIMATE FOR MOVE WAS 12-14 HOURS	11-5
40	ADMINISTRATIVE MARCH	16 HOURS IN TRANSIT	UNDER AIR ATTACK	11-5
41	ADMINISTRATIVE MARCH	5 HOURS IN TRANSIT	UNDER AIR ATTACK	11-5
42	ADMINISTRATIVE MARCH	36 HOURS IN TRANSIT	HALF THE DISTANCE WAS ADMIN, REST WAS BEHIND ENEMY LINES	11-5
43	DIVISION ADVANCES		ADMINISTRATIVE MOVE	11-6
44	DIVISION ADVANCES			11-6
45	DIVISION ADVANCES			11-6

WAINSTEI

NO.	OPERATION NAME/PHASE	NOTES	REMARKS	SOURCE TABLE NO.
46	DIVISON ADVANCES			11-6
47	DIVISON ADVANCES			11-6
48	DIVISON ADVANCES			11-6
49	DIVISON ADVANCES			11-6
50	DIVISON ADVANCES			11-6
51	DIVISON ADVANCES			11-6
52	DIVISON ADVANCES			11-6
53	DIVISON ADVANCES			11-6
54	DIVISON ADVANCES			11-6
55	DIVISON ADVANCES			11-6
56	DIVISON ADVANCES			11-6
57	DIVISON ADVANCES			11-6
58	DIVISON ADVANCES			11-6
59	DIVISON ADVANCES			11-6
60	DIVISON ADVANCES			11-6
61	DIVISON ADVANCES			11-6
62	DIVISON ADVANCES			11-6
63	DIVISON ADVANCES			11-6
64	DIVISON MOVEMENTS			11-6
65	DIVISON MOVEMENTS			11-6
66	DIVISON MOVEMENTS			11-6
67	DIVISON MOVEMENTS			11-6
68	DIVISON MOVEMENTS			11-6
69	DIVISON MOVEMENTS			11-6
70	DIVISON MOVEMENTS			11-6
71	DIVISON MOVEMENTS			11-6
72	DIVISON MOVEMENTS			11-6
73	DIVISON MOVEMENTS			11-6
74	DIVISON MOVEMENTS			11-6
75	DIVISON MOVEMENTS			11-6
76	REPRESENTATIVE ADVANCES			11-6
77	REPRESENTATIVE ADVANCES			11-6
78	REPRESENTATIVE ADVANCES			11-6
79	REPRESENTATIVE ADVANCES			11-6
80	REPRESENTATIVE ADVANCES			11-6
81	REPRESENTATIVE ADVANCES			11-6
82	REPRESENTATIVE ADVANCES			11-6
83	REPRESENTATIVE ADVANCES			11-6
84	REPRESENTATIVE ADVANCES			11-6
85	REPRESENTATIVE ADVANCES			11-6
86	REPRESENTATIVE ADVANCES			11-6
87	REPRESENTATIVE ADVANCES			11-6
88	REPRESENTATIVE ADVANCES			11-6
89	REPRESENTATIVE ADVANCES			11-6
90	REPRESENTATIVE ADVANCES			11-6

ADMIN. MOVE, NIGHT, BAD WX, TOWARDS BULGE

LESS THAN 24 HRS

MOVEMENT MOSTLY BEHIND FRIENDLY LINES

3 KIA, 10 MIA

6 KIA

4 KIA

15 KIA, 47 MIA, 13 MIA

3 KIA, 20 MIA, 11 MIA

1 KIA, 12 MIA, 8 MIA

20 KIA

12 KIA, 20 MIA, 12 MIA

4 KIA, 30 MIA, 12 MIA

43 KIA, 179 MIA, 14 MIA

37 KIA, 60 MIA

CLOSE TERRAIN, MODERATE OPPOSITION

NIGHT ADVANCE

DIFFICULT TERRAIN, LIGHT OPPOSITION

MIXED TERRAIN, LIGHT OPPOSITION

MIXED TERRAIN, SCATTERED RESISTANCE

RIVER CROSSING, LIGHT OPPOSITION

NO OR LIGHT RESISTANCE

NO OR LIGHT RESISTANCE

STIFF RESISTANCE

SINGLE ROAD FRONTAGE

OPEN TERRAIN, LIGHT OPPOSITION

VERY POOR WEATHER

DIFFICULT TERRAIN, HEAVY DEFENSES

DIFFICULT TERRAIN, HEAVY DEFENSES

DIFFICULT TERRAIN, HEAVY DEFENSES

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WAINSTEI

NO.	OPERATION NAME/PHASE	NOTES	REMARKS	SOURCE TABLE NO.
91	CORPS ATTACKS			11-9
92	CORPS ATTACKS			11-9
93	CORPS ATTACKS			11-9
94	CORPS ATTACKS			11-9
95	CORPS ATTACKS			11-9
96	CORPS ATTACKS	SOUTH OF AACHEN		11-9
97	CORPS ATTACKS			11-9
98	LORRAINE CAMPAIGN	4TH ARMORED DIV		11-9
99	LORRAINE CAMPAIGN	90TH DIV		11-9
100	SICILY			11-10
101	SICILY			11-10
102	SICILY			11-10
103	ITALY			11-10
104	ITALY			11-10
105	ITALY			11-10
106	ITALY			11-10
107	ITALY			11-10
108	ITALY			11-10
109	ITALY			11-10
110	ITALY			11-10
111	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
112	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
113	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
114	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
115	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
116	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
117	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
118	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
119	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
120	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
121	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
122	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
123	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
124	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
125	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
126	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
127	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
128	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
129	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
130	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
131	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
132	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
133	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
134	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-11
135	EASTERN FRONT		BASED ON THE WEST POINT ATLAS OF AMERICAN WARS	11-12

WAINSTEI

NO.	OPERATION NAME/PHASE	NOTES	REMARKS	SOURCE TABLE NO.
136	EASTERN FRONT			11-12
137	EASTERN FRONT			11-12
138	EASTERN FRONT	EAST OF SEA OF AZOV	AGAINST GERMAN ARMY GROUP A	11-12
139	EASTERN FRONT	NORTH OF SEA OF AZOV	BY GERMAN ARMY GROUP SOUTH	11-12
140	EASTERN FRONT			11-12
141	EASTERN FRONT			11-12
142	EASTERN FRONT			11-12
143	EASTERN FRONT			11-12
144	EASTERN FRONT			11-12
145	EASTERN FRONT			11-12
146	EASTERN FRONT			11-12
147	EASTERN FRONT			11-12
148	EASTERN FRONT			11-12
149	EASTERN FRONT			11-12
150	EASTERN FRONT			11-12
151	EASTERN FRONT			11-12
152	EASTERN FRONT			11-12
153	EASTERN FRONT		AGAINST GERMAN ARMY GROUP SOUTH	11-12
154	EASTERN FRONT		AGAINST GERMAN ARMY GROUP SOUTH	11-12
155	EASTERN FRONT		AGAINST XIX MOUNTAIN CORPS, FINLAND	11-12
156	EASTERN FRONT			11-12
157	EASTERN FRONT			11-12
158	EASTERN FRONT			11-12
159	KOREA			11-13
160	KOREA			11-13
161	KOREA			11-13
162	KOREA	TO CAPTURE OF SEOUL		11-13
163	KOREA			11-13
164	KOREA			11-13
165	KOREA	EAST COAST		11-13
166	KOREA	WEST COAST		11-13
167	KOREA			11-13
168	KOREA			11-13
169	KOREA			11-13
170	KOREA			11-13
171	KOREA			11-13
172	FRANCO-PRUSSIAN WAR	TO ARRIVAL AT PARIS	THE YEAR IS 1870	11-15
173	WORLD WAR I	GERMAN FIRST ARMY		11-15
174	WORLD WAR I	GERMAN SECOND ARMY		11-15
175	WORLD WAR I		FROM CAPORETTO TO THE PIAVE	11-15
176	WORLD WAR I			11-15
177	ARAB-ISRAELI, 1967			111-3
178	ARAB-ISRAELI, 1967			111-3
179	ARAB-ISRAELI, 1973			111-4
180	ARAB-ISRAELI, 1973			111-4

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WAINSTEI

NO.	OPERATION NAME/PHASE	NOTES	REMARKS	SOURCE TABLE NO.
181	WORLD WAR II			IV-2
182	WORLD WAR II			IV-2
183	WORLD WAR II			IV-2
184	WORLD WAR II			IV-2
185	WORLD WAR II			IV-2
186	WORLD WAR II			IV-2
187	WORLD WAR II			IV-2
188	WORLD WAR II			IV-2
189	WORLD WAR II			IV-2
190	WORLD WAR II			IV-2
191	WORLD WAR II			IV-2
192	WORLD WAR II			IV-2
193	WORLD WAR II			IV-2
194	WORLD WAR II			IV-2
195	WORLD WAR II			IV-2
196	WORLD WAR II			IV-2
197	WORLD WAR II			IV-2
198	WORLD WAR II			IV-2
199	WORLD WAR II			IV-3
200	WORLD WAR II			IV-3
201	WORLD WAR II			IV-3
202	WORLD WAR II			IV-3
203	WORLD WAR II			IV-3
204	WORLD WAR II			IV-3
205	WORLD WAR II			IV-3
206	WORLD WAR II			IV-3
207	WORLD WAR II			IV-3
208	WORLD WAR II			IV-3
209	WORLD WAR II			IV-3
210	WORLD WAR II			IV-3
211	WORLD WAR II			IV-3
212	WORLD WAR II			IV-3
213	WORLD WAR II			IV-3
214	WORLD WAR II			IV-3
215	WORLD WAR II			IV-3
216	WORLD WAR II			IV-3
217	WORLD WAR II			IV-3
218	WORLD WAR II			IV-3
219	WORLD WAR II			IV-3
220	WORLD WAR II			IV-3
221	WORLD WAR II			IV-3
222	WORLD WAR II			IV-3
223	WORLD WAR II			IV-3
224	WORLD WAR II			IV-3
225	WORLD WAR II			IV-3

WAINSTEI

NO.	OPERATION NAME/PHASE	NOTES	REMARKS	SOURCE TABLE NO.
226	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
227	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
228	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
229	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
230	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
231	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
232	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
233	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
234	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
235	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
236	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	DISTANCE IS MILES FROM BEACH BY ROAD	IV-3
237	WORLD WAR II	RATE IS AVG SINCE 6 JUNE	TOTAL V CORPS ADVANCE, 6 JUN 44 TO 8 MAY 45	IV-3

XENOPHON

1. Data Source:

- a. Title: The Persian Expedition (Anabasis)
- b. Author: Xenophon
- c. Date: 400 BC (Translated by Rex Warner, 1947)
- d. Organization: Penguin Books, New York, NY
- e. Number: NA
- f. Available from: Publisher or libraries

2. Data Description:

a. The Xenophon data were compiled from the source by Dr. Robert L. Helmbold of CAA. They consist of the 38 instances in which Xenophon mentions in his narrative both a distance and a corresponding duration of advance.

b. The data are for episodes that occurred during the advance and retreat of about 10,000 Greek mercenaries through the Persian Empire in 401-400 BC. During their advance, the Greek mercenaries were part of Cyrus the Younger's rebel army, but when he was killed during the battle of Cunaxa the Greeks were isolated deep within the hostile Persian empire. For the first month of their retreat from Cunaxa, the Greeks were escorted peaceably by Persian forces. Thereafter they were severely harried by the Persians and by semicivilized mountain tribes until they reached the safety of the Greek colonies along the southern shore of the Black Sea. Throughout, the Greeks moved entirely by foot, supported by pack animals. Only a handful of their highest-ranking commanders had horses.

3. Discussion and Comments:

a. The translator of the source states in his introduction that "I have attempted to use as many English words as possible; consequently I have, for example, got rid of the 'parasang,' so familiar to beginners in Greek, and turned it, rather inaccurately, into miles. The fact is that the distance represented by a parasang differs in accordance with the nature of the country over which one is marching, so it is impossible to give an exact measurement that would not be insupportably cumbrous for each day's march." Based on some preliminary analysis of the data, the translator probably has rounded off the mile values and may have favored values that correspond to 15 miles/day.

b. For the most part, it is not clear just what type of terrain or weather obtained for Xenophon's advances, or the extent to which enemy forces opposed them. Where it is clear, it is so indicated in the XENOPHON data base.

4. Data Table Notes: These advances were by forces that were lightly engaged.

PART 1 OF 2

XENOPHON

NO.	OPERATION NAME/PHASE	ROUTE, LOCALE, SECTOR OR OTHER INFORMATION	DISTANCE (MILES)	DISTANCE (KM)	TIME (DAYS)	TIME (HOURS)	RATE (KM/DAY)	START DATE-1	END DATE-2	OPP/N INTENS	MODE OF MOVEMENT	TOPOGRAPHY	VEGETATION	FOOTING
1	N/A	CUNAXA TO TRAPEZUS	66	106.22	3	3	35.41	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
2	N/A	CUNAXA TO TRAPEZUS	24	38.62	1	1	38.62	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
3	N/A	CUNAXA TO TRAPEZUS	60	96.56	3	3	32.19	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
4	N/A	CUNAXA TO TRAPEZUS	36	57.94	2	2	28.97	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
5	N/A	CUNAXA TO TRAPEZUS	60	96.56	3	3	32.19	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
6	N/A	CUNAXA TO TRAPEZUS	30	48.28	2	2	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
7	N/A	CUNAXA TO TRAPEZUS	30	48.28	2	2	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
8	N/A	CUNAXA TO TRAPEZUS	60	96.56	3	3	32.19	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
9	N/A	CUNAXA TO TRAPEZUS	90	144.84	5	5	28.97	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
10	N/A	CUNAXA TO TRAPEZUS	75	120.70	4	4	30.18	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
11	N/A	CUNAXA TO TRAPEZUS	75	120.70	4	4	30.18	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
12	N/A	CUNAXA TO TRAPEZUS	30	48.28	2	2	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
13	N/A	CUNAXA TO TRAPEZUS	15	24.14	1	1	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
14	N/A	CUNAXA TO TRAPEZUS	45	72.42	2	2	36.21	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
15	N/A	CUNAXA TO TRAPEZUS	15	24.14	1	1	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
16	N/A	CUNAXA TO TRAPEZUS	15	24.14	1	1	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
17	N/A	CUNAXA TO TRAPEZUS	60	96.56	4	4	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
18	N/A	CUNAXA TO TRAPEZUS	90	144.84	5	5	28.97	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
19	N/A	CUNAXA TO TRAPEZUS	45	72.42	3	3	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
20	N/A	CUNAXA TO TRAPEZUS	105	168.98	5	5	33.80	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
21	N/A	CUNAXA TO TRAPEZUS	270	434.52	13	13	33.42	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
22	N/A	CUNAXA TO TRAPEZUS	36	57.94	3	3	19.31	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
23	N/A	CUNAXA TO TRAPEZUS	9	14.48	1	1	14.48	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
24	N/A	CUNAXA TO TRAPEZUS	18	28.97	1	1	28.97	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
25	N/A	CUNAXA TO TRAPEZUS	12	19.31	1	1	19.31	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
26	N/A	CUNAXA TO TRAPEZUS	15	24.14	1	1	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
27	N/A	CUNAXA TO TRAPEZUS	30	48.28	2	2	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
28	N/A	CUNAXA TO TRAPEZUS	45	72.42	3	3	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
29	N/A	CUNAXA TO TRAPEZUS	45	72.42	3	3	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
30	N/A	CUNAXA TO TRAPEZUS	45	72.42	3	3	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
31	N/A	CUNAXA TO TRAPEZUS	45	72.42	3	3	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
32	N/A	CUNAXA TO TRAPEZUS	105	168.98	7	7	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
33	N/A	CUNAXA TO TRAPEZUS	30	48.28	2	2	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
34	N/A	CUNAXA TO TRAPEZUS	90	144.84	5	5	28.97	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
35	N/A	CUNAXA TO TRAPEZUS	60	96.56	4	4	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
36	N/A	CUNAXA TO TRAPEZUS	60	96.56	4	4	24.14	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
37	N/A	CUNAXA TO TRAPEZUS	30	48.28	3	3	16.09	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED
38	N/A	CUNAXA TO TRAPEZUS	21	33.80	2	2	16.90	401 BC	400 BC	BC LITE	FOOT	MIXED	MIXED	MIXED

PART 2 OF 2

XENOPHON

NO.	FORCE SIZE	NOTES
1	DIV	P 21
2	DIV	P 21
3	DIV	P 21
4	DIV	P 22
5	DIV	P 22
6	DIV	P 22
7	DIV	P 22
8	DIV	P 23
9	DIV	P 23
10	DIV	P 23
11	DIV	P 24
12	DIV	P 31
13	DIV	P 31
14	DIV	P 31
15	DIV	P 31
16	DIV	P 32
17	DIV	P 33
18	DIV	P 33
19	DIV	P 33
20	DIV	P 36
21	DIV	P 36/37
22	DIV	P 43
23	DIV	P 45
24	DIV	P 118
25	DIV	P 118
26	DIV	P 146
27	DIV	P 146
28	DIV	P 146
29	DIV	P 146
30	DIV	P 150
31	DIV	P 150
32	DIV	P 156
33	DIV	P 156
34	DIV	P 161
35	DIV	P 164
36	DIV	P 164
37	DIV	P 166
38	DIV	P 169

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APPENDIX B

SOME ANECDOTAL INFORMATION ON RATES OF ADVANCE

B-1. PURPOSE AND SCOPE

a. This appendix provides a collection of anecdotal information on rates of advance. Such information seldom lends itself to statistical tabulation, and indeed its statistical relevance is often questionable. Nevertheless, it may illuminate certain aspects of operational maneuvers and advances not readily captured in statistical tabulations. I sought—without much success—specific statistical data on the routes, distances, durations, and force sizes involved in such land travels and military or quasi-military marches as the following:

- Crusades
- Mongols
- Arab-Israeli Wars
- Chinese Long March
- Bataan "Death March"
- Stonewall Jackson's Valley Campaign
- Primitive tribes (Zulus, American Indians, etc.)
- Nomads
- Muslim conquests
- Boer trekkers
- Caravans (across deserts, along the silk road, etc.)
- Adventurers (Polar expeditions, etc.)

Many leads were pursued, though few struck pay dirt. Such information as was obtained is included. It is obviously an "opportunity sample" in statistical terms, and so may or may not be representative.

b. In the main, this appendix gives information on additional cases not treated in Appendix A's data bases. In the few cases of overlap, this appendix supplements Appendix A's data bases with clarifications, more details, or alternative versions.

B-2. MANNER OF PRESENTATION. Each note starts on a new page. Each note is given a short name, and they are presented in alphabetical order by that name, as listed below.

- ARNOLD'S EXPEDITION
- ARTILLERY USAGE IN WORLD WAR II
- CENTRAL EUROPEAN EXERCISES
- CLAUSEWITZ
- CUSTER
- DECISIVE BATTLES OF THE SOVIET ARMY
- DOUGLAS
- FALKLANDS
- FM 100-5
- FM 101-10
- GREAT PEACE MARCH
- HARRIET FAST SCOTT
- KEARNY'S MARCH
- MARSHALL
- MORRIS
- NEZ PERCE

CAA-RP-90-04

OREGON TRAIL
PONY EXPRESS
SAVKIN-OPERATIONAL ART
SEARS
SEVERIN
SIDORENKO
SIMPKIN
THUTMOSE III
TUCHMAN
VAN CREVELD

ARNOLD'S EXPEDITION

1. Source:

- a. Title: Encyclopedia of Military History: From 3500 B.C. to the Present
- b. Author: Dupuy, R. Ernest and Trevor N. Dupuy
- c. Date: 1970
- d. Organization: Harper & Row, Publishers, New York and Evanston

2. Notes:

a. (pp 710-711) General Benedict Arnold with 1,100 volunteers left Cambridge, Massachusetts on 12 September 1775. During the initial part of their expedition, they traveled by boat up the coast and on to the upper reaches of the Kennebec River of Maine. There they disembarked and marched overland to Quebec, reaching the southern bank of the St. Lawrence River opposite Quebec on 8 November 1775. About 600 completed the march. They crossed the St. Lawrence on 13 November, and on 3 December were joined by Montgomery's forces from Montreal. On 31 December 1775, the combined force assaulted Quebec, but were repulsed by its defenders and suffered heavy losses.

b. The entire expedition, including that travelled by boat, covered about 400 miles [644 km] and took 58 days (12 Sep - 8 Nov), for a rate of advance of about 6.9 mi/day or 11.1 km/day.

3. Comments: None

ARTILLERY USAGE IN WORLD WAR II

1. Source:

- a. Title: Artillery Usage in World War II, Volume II
- b. Author: Love, J. Duncan
- c. Date: April 1959
- d. Organization: Operations Research Office, The Johns Hopkins University, Bethesda, MD, AD-208 021

2. Notes:

a. (p 71) "[The source obtained its information from] the original firing records of field artillery units supporting the [US] Fifth Army in Italy. About 90 percent of the records for corps artillery and 20 percent of the records for division artillery were obtained for the period 1 May-31 August 1944; this amounted to 34,425 missions, 1,562 million rounds, and 50,600 tons of ammunition."

b. (p 71) "In the beginning of May 1944 the Fifth Army was in a static position preparing for an attack against the German Army. Approximately half the Allied forces were on the Anzio Beachhead; the other half were on the Southern Front 30 miles to the west. On the Southern Front the static phase lasted until 11 May; at Anzio the static phase lasted until 23 May. The initial attack started on these dates; in the Southern Front the heavy resistance to the Allied attack lasted 6 days. In Anzio the heavy resistance lasted 9 days, until 1 June. After this resistance had been broken the Allied advance continued until 25 July; the remainder of July and all August was a second static phase. Three phases are distinguished in describing the weapon and target characteristics: static, attack, and movement phases."

c. (p 125) "The frequency of movement for the artillery units in the Italian campaign was computed for three phases of the action. These three phases are slightly different from those [described above]; there was no attempt to compute either the frequency of moves or the decrease in rounds fired during moves in the static phase. Moves made during the static phase were made for tactical purposes; they were well planned, and moves were made into fully prepared positions. The attack phase is unchanged in this appendix from that [described above]. The movement phase has been divided into slow and rapid movement. The [fast?] movement phase lasted from 1 to 17 June 1944 and involved the capture of Rome. On approximately 17 June the German forces were able to offer fully organized resistance to the Allied advance, and the rate of movement decreased from an average of 8 miles/day to an average of 2 miles/day. The frequency of these moves, in terms of the number of days between moves, is given in [Table B-1] for all weapons except the 8-in. gun. There were only two batteries of the 8-in. gun in the Italian campaign, and these units did not move often enough to provide reasonable data for analysis. The average distance in each move is also given in [Table B-1]. The distance that is listed in this table is the straight-line distance between the two firing locations; it was not possible to obtain the actual mileage of each move. An attempt was made to relate the distance moved with the time required to move. In terms of straight-line distances, the average speed of the 105-mm How and the 155-mm How battalions was 3 mph, that of the 155-mm gun and 8-in. How battalions was 2 mph."

Table B-1: Days Between Battalion Moves and Average Distance Moved

Weapon	Attack phase		Movement phase			
			Slow movement		Rapid movement	
	Days	Distance Thous of yd	Days	Distance Thous of yd	Days	Distance Thous of yd
105-mm How						
SP	2.2	5.1	4.8	8.1	1.2	13.2
Towed	3.4	5.9	2.7	7.5	1.2	12.9
4.5-in. gun	4.0	6.6	3.2	12.0	---	---
155-mm How	2.9	6.8	2.6	9.4	1.5	13.3
155-mm Gun	4.8	5.8	3.1	11.2	2.2	18.1
8-in. How	5.3	7.9	2.6	8.6	2.1	16.0
240-mm How	10.0	8.5	6.3	16.8	---	---

3. Comments: None

CENTRAL EUROPEAN EXERCISES

1. Source:

- a. Title: Notes and Briefing Materials on Rates of Advance in Central European Exercises
- b. Author: Egger, COL, et al.
- c. Date: Undated
- d. Organization: Personal communication from COL Egger, 20 September 1989 (point of contact was Mr. Walter Schmitz, Industriebetriebe-Betriebsgesellschaft (IABG) mbH -SOP-, Einsteinstrasse 20, 8012 Ottobrunn, Federal Republic of Germany)

2. Notes:

a. These notes and briefing materials were prepared by COL Egger of the Bundeswehr and his colleagues. They compared the rates of movement in some Central European exercises to the rates of advance in historical operations by the Soviets (Operation Bagration, 1944), by Guderian (1941), by Rommel (1942), and by the Israelis (1967). They used information from the following Central European exercises:

- (1) REFORGER exercise BLAUE DONAU [Blue Danube], 1978
- (2) REFORGER exercise GROSSE ROCHADE, 1975
- (3) REFORGER exercise HARTE FAUST [Strong Heart], 1979
- (4) Corps-level exercise SANKT GEORG [Saint George], 1980
- (5) A Soviet exercise, 1978

b. The following lists the major points of comparison. The inference is that the rates of advance in exercises generally fall within the historical range.

<u>Operation/Exercise</u>	<u>Rates of advance (km/day)</u>
Bagration	20
Guderian	53
Rommel	88
Israelis	120
Blue Danube	38-132
Grosse Rochade	31-110
Strong Heart	29-192
Saint George	29-77
Soviet Exercise	60-100

3. Comments: None

CLAUSEWITZ

1. Source:

- a. Title: On War
- b. Author: Clausewitz, Carl von (Edited and Translated by Michael Howard and Peter Paret)
- c. Date: 1832 (Original), 1976 (Translation)
- d. Organization: Princeton University Press, Princeton, NJ

2. Notes:

a. (p 310) "Take a division of 10,000 or 12,000 men, augmented by cavalry, which has been sent a day's march of fifteen to twenty miles [24 to 32 km] ahead. In ordinary, not particularly difficult country, it will be able to delay the enemy for about half as long again (including the time of his own retreat) as would otherwise be required to cover the distance. ... So a distance of twenty miles [32.2 km], which would ordinarily amount to a march of about ten hours, can be expected to take the enemy fifteen hours from the time he appears in strength before one's advanced division until he is in position to attack our main force."

b. (p 316) "Experience also teaches that the head of a column of four divisions with a cavalry reserve can generally do fifteen miles [24.14 km] in eight hours, even on inferior roads. At the rate of an hour per division, and the same for the cavalry and artillery reserves, the march will take thirteen hours to complete. This is not too long a time, and yet enough for a total of 40,000 men to march along one road."

c. (p 319) "Modern armies have long been accustomed to consider a fifteen-mile [24.14 km] march as a day's work. In extensive operations, it must be reduced to an average of ten miles [16.09 km] in order to allow for the requisite days of rest on which necessary repairs and maintenance can be carried out.

"A division of 8,000 men takes eight to ten hours for such a march in level country and on ordinary roads. In mountainous country, it will take ten to twelve [hours]. If a column consists of a number of divisions, a few hours longer will be required, even discounting the delayed starting time of the later divisions.

"It is clear that the day is pretty well filled by such a march, and that one cannot compare the strain on a soldier loaded with his pack for ten or twelve hours with an ordinary fifteen-mile [24.14 km] walk which would not take an individual more than five hours on a decent road.

"Forced marches, if undertaken one at a time, may cover twenty-five miles [40.23 km], or thirty [48.28 km] at the most; if they continue, only twenty [32.2 km].

"A march of twenty-five miles [40.23 km] will call for a rest stop of several hours, and a division of 8,000 men will not manage it in less than sixteen hours even on good roads. If the distance to be covered is thirty miles [48.28 km] and several divisions are involved, one has to allow a minimum of twenty hours."

d. (p 320) "[The] Prussian army, on its retreat in 1806, [had it done some things differently] need not have made immense exertions to cover some 250 miles [402.34 km] in no less than fourteen days [17.86 mi/day or 28.74 km/day]."

e. (p 320) "So the Seven Year's War produced marches that have still not been surpassed: Lascy's, for instance, in 1760, in support of the Russian diversion toward Berlin. He covered the 220 miles [354.06 km] from Schweidnitz through Lusatia to

Berlin in ten days—a rate of 22 miles a day, which would be astounding even nowadays for a corps of 15,000 men [22 mi/day = 35.41 km/day].”

f. (p 320) “Hence the fact that Bonaparte, when pursuing the Prussians and trying to cut off their retreat in 1806, and Blücher, intending to do the same to the French in 1813, both required ten days to cover only 150 miles [241.40 km] or so. That was a rate which Frederick the Great achieved, baggage and all, when marching from Saxony to Silesia and back.”

g. (p 321) “In general, the reduction in baggage will result in a saving of effort rather than an acceleration of movement.”

h. (p 322) “A single moderate march will not blunt the instrument [i.e., the fighting forces]; but a series of moderate marches will begin to tell, while a series of strenuous marches will naturally do much greater harm.”

i. (p 323) “A march of 500 miles [804.67] or more will always cause an army to arrive at its destination in a highly weakened condition, especially where horses and wagons are concerned. ... Bonaparte’s advance was indeed unrelenting, from the crossing of the Niemen up to Moscow; but one must bear in mind that it took 82 days to cover only about 600 miles [965.61 km], and that the army stopped altogether—once for some 14 days at Vilna and the other time for some 11 days at Vitebsk—which must have given many stragglers time to catch up.”

j. (p 324) “Great wear and tear on one’s own forces, therefore, must be expected if one intends to wage a mobile war. All other plans must be adjusted to that fact; and above all, replacements must be provided for.”

k. (p 545) “Naturally we assume that the defender will act as sensibly and correctly as the attacker. We say this in order to exclude certain vague notions about sudden assaults and surprise attacks, which are commonly thought of as bountiful sources of victory. They will only be that under exceptional circumstances.”

3. Comments: None

CUSTER

1. Source:

- a. Title: General Custer and the Battle of the Little Big Horn: The Federal View
- b. Author: Carroll, John M. (ed.)
- c. Date: 1986
- d. Organization: J. M. Carroll & Co., PO Box 1200, Mattituck, NY 11952

2. Notes:

a. The source contains reprints of Government reports on matters related to the battle of the Little Big Horn. Several of these reports mention infantry or cavalry marches made by forces in the general area of the battle. It appears that in those days engineer officers had the job of recording the progress of forces on the march in a log or diary, and for always knowing where they were on the prairie or in the badlands. It seems they were also supposed to note in their log information on weather; river widths and depths; geological observations; and any other information useful in evaluating the locale's potential for economic development. These engineer reports appear to be the best information on distances and dates.

b. One of the engineer reports reprinted in the source is the "Journal of the Marches Made by the Forces Under Colonel John Gibbon, Commanding the Expedition Down the Yellowstone, Between the 1st Day of April and the 29th Day of September, 1876, by Lieutenant E. J. McClernand, Second Cavalry, Acting Engineer Officer." This Journal is appended to the "Annual Report of Lieutenant Edward Maguire, Corps of Engineers, for the Fiscal Year Ending June 30, 1877: Explorations and Surveys in the Department of Dakota," which in turn appeared as Appendix PP to the "Annual Report of the Chief of Engineers for the Fiscal Year Ending June 30, 1877." For the period covered by LT McClernand's Journal, COL Gibbon commanded the Second Cavalry Battalion, and for most of this period six companies of the 7th Infantry Battalion were also under his command. Among other things, LT McClernand's journal indicates that the distances the infantry marched were "measured." Although he doesn't say how, I imagine it was by a wheel attached to one of the wagons. His journal also indicates that often the distances the cavalry marched were estimated on the basis of the elapsed time (and, evidently, some assumed or nominal rate). Table B-2 gives the daily advances by cavalry units that LT McClernand recorded in his journal. (We supplied the "Day number" and the kilometer equivalents in that table; an entry of 0 means that the unit remained in camp and did not march that day; and an entry of ? means that the journal does not say what distance should be entered for that day.) Except for the 8-day period of 24 Apr to 01 May when it is for a scouting expedition by Companies H and F of the 2d Cav Bn, the cavalry unit is the 2d Cav Bn. The rest of the 2d Cav Bn remained in camp during this scouting expedition. Since the infantry companies traveled with the 2d Cav Bn only part of the time, the journal does not usually give daily distances for them. Those it specifically attributes to infantry are shown in Table B-3.

c. Table B-4 gives the summary information for the operations of the 2d Cav Bn and the 7th Infantry units in LT McClernand's journal. The column headed "Elapsed" gives the number of days. Subordinate units usually moved farther, since they were sent on scouting excursions or other missions while their parent unit stood still.

Table B-2. Daily Distances for Cavalry Units

<u>Day number</u>	<u>Date</u>	<u>Miles</u>	<u>Kilometers</u>
1	01-Apr-76	7	11.27
2	02-Apr-76	5.5	8.85
3	03-Apr-76	18	28.97
4	04-Apr-76	0	0.00
5	05-Apr-76	19.6	31.54
6	06-Apr-76	21	33.80
7	07-Apr-76	20	32.19
8	08-Apr-76	6.2	9.98
9	09-Apr-76	?	0.00
10	10-Apr-76	0	0.00
11	11-Apr-76	0	0.00
12	12-Apr-76	0	0.00
13	13-Apr-76	11.25	18.11
14	14-Apr-76	14.18	22.82
15	15-Apr-76	17.35	27.92
16	16-Apr-76	7.07	11.38
17	17-Apr-76	15.8	25.43
18	18-Apr-76	0	0.00
19	19-Apr-76	18.6	29.93
20	20-Apr-76	17.17	27.63
21	21-Apr-76	2.02	3.25
22	22-Apr-76	0	0.00
23	23-Apr-76	0	0.00
24	24-Apr-76	21.5	34.60
25	25-Apr-76	32	51.50
26	26-Apr-76	20.5	32.99
27	27-Apr-76	18	28.97
28	28-Apr-76	21.5	34.60
29	29-Apr-76	27	43.45
30	30-Apr-76	20	32.19
31	01-May-76	17	27.36
32	02-May-76	0	0.00
33	03-May-76	0	0.00
34	04-May-76	0	0.00
35	05-May-76	0	0.00
36	06-May-76	0	0.00
37	07-May-76	0	0.00
38	08-May-76	0	0.00
39	09-May-76	0	0.00
40	10-May-76	16.75	26.96
41	11-May-76	0	0.00
42	12-May-76	18.9	30.42
43	13-May-76	0	0.00
44	14-May-76	16.97	27.31
45	15-May-76	0	0.00
46	16-May-76	0	0.00
47	17-May-76	0	0.00
48	18-May-76	0	0.00
49	19-May-76	0	0.00
50	20-May-76	8.66	13.94

Table B-2. Daily Distances for Cavalry Units (cont'd)

<u>Day number</u>	<u>Date</u>	<u>Miles</u>	<u>Kilometers</u>
51	21-May-76	0	0.00
52	22-May-76	0	0.00
53	23-May-76	0	9.00
54	24-May-76	0	0.00
55	25-May-76	0	0.00
56	26-May-76	0	0.00
57	27-May-76	0	0.00
58	28-May-76	0	0.00
59	29-May-76	0	0.00
60	30-May-76	0	0.00
61	31-May-76	0	0.00
62	01-Jun-76	0	0.00
63	02-Jun-76	0	0.00
64	03-Jun-76	0	0.00
65	04-Jun-76	0	0.00
66	05-Jun-76	9	14.48
67	06-Jun-76	10.54	16.96
68	07-Jun-76	21.5	34.60
69	08-Jun-76	16.15	25.99
70	09-Jun-76	0	0.00
71	10-Jun-76	0	0.00
72	11-Jun-76	9.23	14.85
73	12-Jun-76	15.6	25.11
74	13-Jun-76	13.16	21.18
75	14-Jun-76	11.88	19.12
76	15-Jun-76	0	0.00
77	16-Jun-76	0	0.00
78	17-Jun-76	0	0.00
79	18-Jun-76	0	0.00
80	19-Jun-76	0	0.00
81	20-Jun-76	0	0.00
82	21-Jun-76	0	0.00
83	22-Jun-76	0	0.00
84	23-Jun-76	0	0.00
85	24-Jun-76	4.02	6.47
86	25-Jun-76	35.75	57.53
87	26-Jun-76	17	27.36
88	27-Jun-76	8.75	14.08
89	28-Jun-76	4.64	7.47
90	29-Jun-76	14.9	23.98
91	30-Jun-76	0	0.00
92	01-Jul-76	20	32.19
93	02-Jul-76	23	37.01
94	03-Jul-76	0	0.00
95	04-Jul-76	0	0.00
96	05-Jul-76	0	0.00
97	06-Jul-76	0	0.00
98	07-Jul-76	0	0.00
99	08-Jul-76	0	0.00
100	09-Jul-76	0	0.00

Table B-2. Daily Distances for Cavalry Units (cont'd)

<u>Day number</u>	<u>Date</u>	<u>Miles</u>	<u>Kilometers</u>
101	10-Jul-76	0	0.00
102	11-Jul-76	0	0.00
103	12-Jul-76	0	0.00
104	13-Jul-76	0	0.00
105	14-Jul-76	0	0.00
106	15-Jul-76	0	0.00
107	16-Jul-76	0	0.00
108	17-Jul-76	0	0.00
109	18-Jul-76	0	0.00
110	19-Jul-76	0	0.00
111	20-Jul-76	0	0.00
112	21-Jul-76	0	0.00
113	22-Jul-76	4.38	7.05
114	23-Jul-76	0	0.00
115	24-Jul-76	0	0.00
116	25-Jul-76	0	0.00
117	26-Jul-76	0	0.00
118	27-Jul-76	4.06	6.53
119	28-Jul-76	16.44	26.46
120	29-Jul-76	22.9	36.85
121	30-Jul-76	15.1	24.30
122	31-Jul-76	0	0.00
123	01-Aug-76	0	0.00
124	02-Aug-76	0	0.00
125	03-Aug-76	0	0.00
126	04-Aug-76	0	0.00
127	05-Aug-76	0	0.00
128	06-Aug-76	0	0.00
129	07-Aug-76	0	0.00
130	08-Aug-76	9	14.48
131	09-Aug-76	10.91	17.56
132	10-Aug-76	15	24.14
133	11-Aug-76	12.45	20.04
134	12-Aug-76	12.64	20.34
135	13-Aug-76	24	38.62
136	14-Aug-76	14	22.53
137	15-Aug-76	20.28	32.64
138	16-Aug-76	19	30.58
139	17-Aug-76	24.1	38.79
140	18-Aug-76	0	0.00
141	19-Aug-76	0	0.00
142	20-Aug-76	0	0.00
143	21-Aug-76	0	0.00
144	22-Aug-76	0	0.00
145	23-Aug-76	0	0.00
146	24-Aug-76	0	0.00
147	25-Aug-76	17.1	27.52
148	26-Aug-76	22.4	36.05
149	27-Aug-76	6.25	10.06
150	28-Aug-76	20.95	33.72

Table B-2. Daily Distances for Cavalry Units (cont'd)

<u>Day number</u>	<u>Date</u>	<u>Miles</u>	<u>Kilometers</u>
151	29-Aug-76	17.36	27.94
152	30-Aug-76	17.5	28.16
153	31-Aug-76	13.26	21.34
154	01-Sep-76	0	0.00
155	02-Sep-76	0	0.00
156	03-Sep-76	0	0.00
157	04-Sep-76	0	0.00
158	05-Sep-76	0	0.00
159	06-Sep-76	13.96	22.47
160	07-Sep-76	25.12	40.43
161	08-Sep-76	15.32	24.66
162	09-Sep-76	26.97	43.40
163	10-Sep-76	9.92	15.96
164	11-Sep-76	21.8	35.08
165	12-Sep-76	5.4	8.69
166	13-Sep-76	20.67	33.27
167	14-Sep-76	21.68	34.80
168	15-Sep-76	16.76	26.97
169	16-Sep-76	18.57	29.89
170	17-Sep-76	23.72	38.17
171	18-Sep-76	0	0.00
172	19-Sep-76	25.18	40.52
173	20-Sep-76	30.62	49.28
174	21-Sep-76	10.29	16.56
175	22-Sep-76	22.75	36.61
176	23-Sep-76	20.52	33.02
177	24-Sep-76	20.66	33.25
178	25-Sep-76	16.7	26.88
179	26-Sep-76	18.63	29.98
180	27-Sep-76	25.64	41.26
181	28-Sep-76	26.6	42.81
182	29-Sep-76	11.28	18.15

Table B-3. Daily Distances for Infantry Units

Day number	Date	Miles	Kilometers
72	11-Jun-76	9.23	14.85
73	12-Jun-76	15.6	25.11
74	13-Jun-76	13.16	21.18
75	14-Jun-76	11.88	19.12
86	25-Jun-76	23.65	38.06
87	26-Jun-76	18.85	30.34
88	27-Jun-76	29.10	46.83
179	26-Sep-76	21.99	35.39
180	27-Sep-76	20	32.19
181	28-Sep-76	23.72	38.17
182	29-Sep-76	21.67	34.87
183	30-Sep-76	25	40.23
184	01-Oct-76	7.50	12.07
185	02-Oct-76	16.9	27.27
186	03-Oct-76	19.5	31.38
187	04-Oct-76	18.33	29.50
188	05-Oct-76	24	38.62
189	06-Oct-76	20.33	32.72

Table B-4. Summary of Operations by 2d Cav Bn and 7th Infantry Units

Unit	From	To	Elapsed	Miles	Km	Mi/day	Km/day
<u>7th Inf Bn:</u>							
As a battalion	17-Mar-76	06-Oct-76	204	1687.39	2715.59	8.27	13.31
MAJ Freeman's co	17-Mar-76	06-Oct-76	204	1895.79	3050.98	9.29	14.96
LT English's co	17-Mar-76	06-Oct-76	204	1934.57	3113.39	9.48	15.26
CPT Sanno's co	17-Mar-76	06-Oct-76	204	1873.63	3015.32	9.18	14.78
<u>2d Cav Bn:</u>							
As a battalion	01-Apr-76	29-Sep-76	182	1393.21	2242.15	7.66	12.32
F Co (LT Roe)	01-Apr-76	29-Sep-76	182	1699.21	2734.61	9.34	15.03
G Co (CPT Wheelan)	01-Apr-76	29-Sep-76	182	1745.71	2809.45	9.59	15.44
L Co (LT Hamilton)	01-Apr-76	29-Sep-76	182	1797.71	2893.13	9.88	15.90
H Co (CPT Ball)	01-Apr-76	29-Sep-76	182	1781.21	2866.58	9.79	15.75

d. The Appendix PP mentioned above also notes at one point that Custer's 7th Cavalry marched 318.5 miles from Fort Abraham Lincoln to the Yellowstone River in May and June 1876, for an average day's march of 15.9 miles (25.6 km).

e. Custer's march in the days immediately preceding the battle are variously reported. There seems to be general agreement that he marched 12 miles (19.3 km) on 22 June 1876, up the Rosebud Creek from its confluence with the Yellowstone. The march of 23 June 1876 is variously reported as 30, 33, and 35 miles (about 34 miles or 55 km nominal value). The march of 24 June 1876 is variously reported as 28 or 45 miles, but I think that 28 miles (45.1 km) is the more reliable figure. On 25 June 1876 (the day of the battle), the march is variously reported as 33 miles or as 6 miles, but I think that a distance of about 20 miles (32.2 km) may be about right. Taking the nominal estimates, then, Custer could have marched 94.2 miles (151.6 km) over 4 days, for an average rate of 23.5 mi/day (37.9 km/day).

3. Comments: Obviously, some of the estimates and figures given above are speculative.

DECISIVE BATTLES OF THE SOVIET ARMY

1. Source:

- a. Title: World War II: Decisive Battles of the Soviet Army
- b. Author: Larionov, V., N. Yeronin, B. Solovyev, V. Timokhov
- c. Date: 1984
- d. Organization: Progress Publishers, Moscow

2. Notes:

a. (p 312) Re: Operation Bagration of Mid-1944, in pursuit of a retreating enemy by tank, motorised, or cavalry corps and armies, rates of advance averaged 25 to 40 km/day, and on some days it ranged from 50 to 70 km/day. The tank armies and corps usually bypassed centers of resistance and did not get bogged down in protracted engagement for settlements.

b. (p 357) Re: Jassy-Kishinev Operation of August 1944, in the second stage of the operation the rate of advance by mobile (tank and motorised) units averaged more than 40 km/day. So high a rate of advance was the result of the complete routing of the enemy in the first stage of the operation.

c. (pp 383-384) Re: Vistula-Oder Operation of January 1945, the first day's advance was 15 to 20 km on a 35-km sector. After 2 days, the advance increased to 25 to 40 km and the breakthrough widened to 60 km. On the fourth day, the fresh 1st Tank Army was committed and its forward brigades "made a dash of 40 to 50 km."

d. (p 388) Re: Vistula-Oder Operation, in pursuit of the enemy the tank armies, tank and mechanised corps broke away from the field armies up to distances of 50 to 80 km. "In their wake the rifle units, supported from the air by the Front aviation, moved ahead at the top possible speed—up to 30 km/day."

e. (p 399) Re: Vistula-Oder Operation, daily average speed of 25 km, and for tank units this speed was 45 to 70 km/day.

f. (p 400) Re: Vistula-Oder Operation, the First Ukrainian Front's rate of advance varied between 11 and 15 km/day. The First Byelorussian Front's rate of advance varied between 13 and 17 km/day. After the Vistula defense line had been surmounted, the rate of advance of the Field Armies increased to 25-35 km/day.

g. (p 418) Re: Berlin Operation of April-May 1945, the *planned* average rates of advance of the 2d Army (Polish) were 14 km/day for field armies and 30 km/day for tank armies. The *planned* rate of advance by the 2d Shock Army was 8 to 11 km/day.

h. (p 510) Re: Manchurian Campaign of August 1945, the rate of advance varied between 17 km/day for the 25th Army to "more than 90 km/day" for the 6th Guards Tank Army.

3. Comments: None

DOUGLAS

1. Source:

- a. Title: I Rode With Stonewall
- b. Author: Douglas, Henry Kyd
- c. Date: 1940 (from the 1899 manuscript as edited by John Kyd Beckenbaugh)
- d. Organization: The University of North Carolina Press, Chapel Hill, North Carolina

2. Notes:

a. (p 9) "We marched as rapidly as the country would permit, seventeen miles [from Winchester] to Paris and then early the next morning to Piedmont, six miles, and there took the [railroad] cars."

b. (p 36) "... he [General Jackson] started off again down [i.e., northwards through] the [Shenandoah] Valley; making a twenty-five mile (40 km) march [from Mount Jackson] the first day. The next day, the 23rd, he [Jackson] was off early and did not stop until he ran up against the enemy near Kernstown and prepared for battle."

c. (p 45) "In less than twenty hours I had ridden about one hundred and five miles (169 km), and since I left General Jackson I had passed around the Massanutton [mountain], over the Blue Ridge, and through rain and mud and impenetrable night had been under the strain of a cavalry charge [figuratively] for more than eighty miles."

"When I revived [from a fainting spell] and had something to eat, ... I remained in bed for twenty- four hours."

d. (p 47) "It was only about sixteen miles (25.75 km) [along the east side of the Shenandoah River from Conrad's Store to Port republic], but it took him [Jackson and his forces] two days and a half to do it. [6.4 mi/day or 10.30 km/day] ... over soft and bottomless roads into which horses and wagons and artillery sank, at times almost out of sight, dragged along by main force of horses and men, the General himself on foot, lifting and pushing among the struggling mass, wet, covered with mud from cap to boots, encouraging soldiers and teamster by word and example,"

e. (p 69) "From Loudoun Heights [near Harper's Ferry] and Charlestown to a point between Kernstown and Newtown—a distance of thirty-five miles [56.3 km]—they made a continuous march and going into camp about midnight rested until morning. It was one of those forced marches which all of General Jackson's army were sometimes called upon to endure, and which won for them the appropriate name of 'Foot Cavalry.'"

f. (p 92) "In thirty days his [Jackson's] army had marched nearly four hundred miles [13.33 mi/day, 644 km, 21.46 km/day], skirmishing almost daily, fought five battles, defeated four armies, two of which were completely routed, captured about twenty pieces of artillery, some four thousand prisoners, and immense quantities of stores of all kinds, and had done all this with a loss of less than one thousand killed, wounded and missing."

g. (p 112-113) "Experience is not lost upon the rank and file, and they generally got a correct idea of the situation: they even anticipated movements [out of contact with the enemy] that were afterwards ordered by their General. On the battlefield too, they took in the perils of a situation, and that is doubtless the reason why veteran troops gave away and became panic-stricken at times, while fresh volunteers who did

not see the danger remained on the field and kept fighting. Old troops often know when they are whipped; new ones often do not and are ignorant of the dangers which lurk in flank and rear. More than once have battles, nearly lost by veterans, been restored by the intrepid obstinacy of new soldiers."

h. (p 169) "Longstreet's troops were sent to Jackson, too, and there were no unfought soldiers, no spectators, no reserves in the Army of Northern Virginia that memorable day [at Antietam]."

i. (p 173) "Just then A. P. Hill in his red and picturesque battle shirt, with 2,500 of his men, who had marched seventeen miles [27.36 km] that day and waded the Potomac River, appeared upon the scene [at Antietam]. ... Jones rallied on Hill and [together] they drove Burnside back to the Antietam and the protection of his heavy guns so rapidly that Hill's other brigades could not catch up and get a share in the fighting."

j. (p 241) "Starting at four o'clock on the 5th [of June] our division moved off and marched for fifteen miles [24.14 km], through Spotsylvania. On the next day we were detained for a while by rumors that the enemy were making demonstrations at Fredericksburg [VA], but we got off later and marched ten miles [16.09 km]. The next day, being Sunday, we marched seventeen miles [27.36 km] and crossed the Rapidan.

"On the 9th we were kept under arms awaiting the result of a severe cavalry fight [Brandy Station] which lasted nearly all that day. ... The next day we only managed about ten miles [16.09 km]; the day following we made eighteen [28.97 km], encamping at Gaines Cross Roads. Starting at 4:30 A.M. on the 12th, we marched eighteen miles and encamped near Cedarville. On the next morning Rodes's division moved toward Berryville, and Johnson and Early to Winchester. We found Winchester well fortified. The 14th was spent demonstrating against the town. ... After dark our division drew off, and after marching about three miles [4.83 km] on the Berryville pike we made a detour by way of Jordan Springs toward the Winchester and Martinsburg pike. We came to the pike about four miles [6.44 km] from Winchester a little before daylight, and there ran into General Milroy's army, retreating from Winchester."

k. (p 289-290) "[General] Early left after midnight for Charlottesville and made a forced march of eighty miles [128.75 km] to that place in four days [20 mi/day, 32.2 km/day]. His [Early's] corps had been greatly reduced in the campaign and numbered about 8,000 effective muskets."

3. Comments: None

FALKLANDS

1. Source:

a. Title: Personal Communication (based on notes taken by Dr. Robert L. Helmbold during a presentation by a representative of the 42d Commandos at CAA a few months after the events of June 1982)

b. Author: Helmbold, Robert L.

c. Date: A few months after June 1982

d. Organization: US Army Concepts Analysis Agency

2. Notes:

a. They marched from West to East across East Falklands Island (from landing at Port San Carlos to vicinity of Port Stanley), a distance of 80 miles [128.75 km], in 3 days. This amounts to 26.67 mi/day [42.92 km/day].

b. They carried 120-130 pound packs (including gas masks) for most of the march across East Falklands, but reduced this to 60-70 pound packs for the assault phase (on Mount Harriet, about 10 km west of Port Stanley).

c. Throughout, the terrain was boggy, rocky, roadless. Weather was intermittent rain or snow, with 20-30 knot winds. 15°-45° Fahrenheit. However, visibility of 15 to 25 km could be had in clear weather from heights.

3. Comments: None

FM 100-5

1. Source:
 - a. Title: Operations
 - b. Author: Anonymous
 - c. Date: May 1986
 - d. Organization: US Army Field Manual FM 100-5
2. Notes: (p 94) [Using the example of Grant's Vicksburg Campaign] "Setting a pace of operations so rapid that his enemies could not follow his activities, Grant defeated the forces of Generals Johnson and Pemberton in five successive engagements. He covered 200 miles in 19 days [10.5 mi/day, or 322 km in 19 days, 16.9 km/day], capturing Jackson and driving the defenders of Vicksburg into their trenches. Grant's 4,000 casualties were only half as great as his enemy's. ... The same speed, surprise, maneuver, and decisive action will be required in the campaigns of the future."
3. Comments: None

FM101-10

1. Data Source:

a. Title: Staff Officer's Field Manual: Organizational, Technical and Logistical Data, Unclassified Data

b. Author: Anonymous

c. Date: July 1971

d. Organization: Headquarters, Department of the Army (FM 101-10-1)

2. Notes:

a. (para 2-9f(1)) Refers to Table 2-4, which gives rates and lengths of road movements "based on modern vehicles, trained personnel, and favorable road and weather conditions." The table cites values of 19-24 km/day for an average day's tactical march by a division moving by foot, with 24-32 km/day for smaller units. The accompanying text explains that under forced march conditions greater distances can be covered. However, it recommends that "For movements on foot over mountainous terrain, planners should allow an additional hour for each 300 meters of climb."

b. (para 2-9f(2)) Indicates that "Small bodies of well-trained troops can move 64 kilometers a day on skis under favorable conditions."

3. Comments: None

GREAT PEACE MARCH

1. Source:

- a. Title: Quiet End to a Long Walk for Peace
- b. Author: Saperstein, Sandra
- c. Date: 16 September 1986
- d. Organization: Washington Post Newspaper (p B1)

2. Notes:

a. The 1986 "Great Peace March" against nuclear weapons left Los Angeles 1 March 1986. It reached Washington, DC on 14 November 1986, having on the way passed through the Mojave Desert; Loveland Pass (Colorado); Nebraska; Girard, Ohio; Toledo, Ohio; McKeesport, PA; Manhattan (NY City); and Harlem (NY City).

b. Marchers numbered about 3,000 at the end of the march, but only about 700 of them had marched all the way. They were supported by a caravan of buses and trucks. Their budget totaled "less than \$900,000 for the entire trip."

c. Distance, about 3,700 miles (5,955 km). Time, about 259 days. Average rate, about 14.29 mi/day or 22.99 km/day.

3. Comments: None

HARRIET FAST SCOTT

1. Source:
 - a. Title: Personal Communication to Dr. Robert L. Helmbold
 - b. Author: From Mrs. Harriet Fast Scott
 - c. Date: 13 February 1987
 - d. Organization: US Army Concepts Analysis Agency
2. Notes: (On the Soviet Manchurian Action Late in WW II)
 - a. Maps don't give the correct borders. The distances and times are about right, although its important to understand that the larger distances apply only to a few "spearhead" elements that were sustained by a very special effort.
 - b. The Soviets were just going across Outer Mongolia, and here there was no opposition, "by and large." To all intents and purposes, the war had ended, and Soviet claims of amount of resistance are exaggerated.
 - c. The Soviets ran out of gas, but pooled fuel to send an advance guard of a few vehicles ahead just to claim the territory for postwar negotiations. Soviets even flew in gas by air to sustain the last drive.
3. Comments: See also the discussion of the Soviet Manchurian Campaign in Appendix A, in connection with the WAINSTEI data base.

KEARNY'S MARCH

1. Source:

- a. Title: Encyclopedia of Military History: From 3500 B.C. to the Present
- b. Author: Dupuy, R. Ernest and Trevor N. Dupuy
- c. Date: 1970
- d. Organization: Harper & Row, Publishers, New York and Evanston

2. Notes:

a. (pp 809-811) During the US-Mexican War, Brigadier General Stephen Watts Kearny, with 1,700 men, left Ft. Leavenworth, KS on 29 June 1846. Marching overland, he occupied Santa Fe on 18 September 1846. He then left Santa Fe on 25 September 1846 with 120 dragoons, and reached southeastern California early in December 1846. There he fought the Battle of San Pascual in an attempt to break through to San Diego. On 9 January 1847, after having been joined by Stockton's sailors and marines, he defeated the Mexicans in the battle of San Gabriel not far from Los Angeles. This virtually ended the Mexican resistance in California.

b. From Ft. Leavenworth to Santa Fe, 785 miles [1,263 km], 82 days, 9.6 mi/day [15.4 km/day].

c. From Santa Fe to Los Angeles, 811 miles [1,305 km], 107 days, 7.6 mi/day [12.2 km/day].

3. Comments: None

MARSHALL

1. Source:

a. Title: Commentary on Infantry Operations and Weapons Usage in Korea, Winter of 1950-51

b. Author: S. L. A. Marshall

c. Date: 27 October 1951

d. Organization: Operations Research Office, ORO-R-13, AD-342

2. Notes: (pp 33-36, *passim*) "Under the best of conditions, in making the approach from the bivouac area to the LD [Line of Departure for an attack], the company will usually have to march [on foot, in addition to whatever truck distance is used] somewhat between one-half and one-and-a-half miles, carrying its own equipment. These things considered, for the Korean terrain, the potential of the infantry company—how far it can move in the attack carrying a fighting load and still remain tactically sound for night defense—can be reckoned approximately as follows:

<u>Terrain</u>	<u>Distances</u>	<u>Load</u>
Over ridges exceeding 400 meters height	1,800-2,200 yards actual distance	Basic fighting
Over ridges averaging 200 meters or slightly less	3,000-3,500 yards actual distance	Basic fighting
Over ridges averaging 100 meters or less	5,000-7,000 yards actual distance	Basic fighting
Road march, flat country	8-9 miles actual distance	Basic load, rations and bedroll

"This scale is premised on the unit not being engaged by heavy or occasional killing fire during the approach march; it applies to movement made under the stresses of the weight carried and the general apprehension of engagement. Sharp fire or sudden losses will radically reduce the potential. These are maximum distances and requirements within the range of slightly cold to moderate temperatures averaging between 20° and 60°. In the summer season and in extreme cold, the figures should be halved for marches at the higher elevations. There will be some reduction during the rainy season when roads and trails are muddy; ice conditions will also lower the figure. Furthermore the altitude of the hill or ridge is a somewhat arbitrary yardstick, since in some cases there would be less stress in climbing a 500-meter hill with gradually ascending slopes than a 150-meter height via a series of rocky sub-ridges and cross-cutting ravines. It is believed, however, that the scale is sufficiently accurate to provide a base for continuing study of this subject. ...

"The city-bred ROK [Republic of Korea] soldier, integrated in the American unit, appeared to react physically to these stresses no better than the average man from this country [the US]. He wore out as quickly and, when fatigued, was even less ready to take an active part in the firing. On the other hand, the country-bred ROK, who was accustomed to moving long distances afoot, had markedly more endurance, and would also tend to respond strongly in emergency situations."

3. Comments: None

MORRIS

1. Source:

- a. Title: Washing of the Spears
- b. Author: Morris, Donald R.
- c. Date: 1965
- d. Organization: Simon & Schuster, New York

2. Notes:

a. (p 309) "Ulundi lay less than 75 miles from the three invasion points, and the country, while rolling and seamed with small rivers and dongas, was generally open. A mounted man could reach Ulundi from the Tugela in a long day's hard riding, a Zulu impi or a Boer commando in two or three day's travel. Even unopposed, however, a British infantry battalion would take the better part of a fortnight to get in and out, and Chelmsford, or course, expected no such rapid progress."

b. (p 312) "A full span of oxen ran from fourteen to eighteen beasts. Less than ten were rarely yoked, for while they might still move the wagon with a ton of goods aboard, they would be stopped by the slightest rise. On steep hills and at drifts where the wheels sank into mud or sand, double spans were needed, and up to forty oxen might be needed to breast the mountain passes. ... An ox required eight hours a day to graze, and a further eight hours to rest while the results of his grazing passed through his multiple stomachs and was regurgitated as cud for a second leisurely mastication. This left eight hours a day for work, during which a full, fresh span might move more than a ton of goods at a steady three miles an hour along a level road. If the team was kept spanned for the full eight hours, it would need several days to recover from the experience, and the teams were usually outspanned for a couple of hours at midday. Under ideal conditions, this meant that a wagon might move as much as eighteen miles a day, but since there were hardly eighteen miles of surfaced road in all of southern Africa, few wagons ever covered more than ten miles a day. A stony track, a sandy drift, or a rainstorm might reduce progress to three or four miles a day, or even stop it entirely."

c. (pp 360-362) "As Wood's spies had predicted, it [the main Zulu impi, numbering about 20,000, dispatched to the battle of Isandhlwana] had departed the vicinity of Ulundi on the seventeenth [17 January 1879]. It had mustered at the great military kraal of Nodwengu, hard by the royal kraal [at Ulundi], and there Cetshwayo had given it its final instructions. ... The army was to march slowly, so as not to tire itself, and it was to attack only in daylight. ... The impi left Nodwengu late on the seventeenth and bivouaced on the banks of White Umfolozi that night. ... The impi covered a leisurely nine miles on the eighteenth, and a similar distance on the nineteenth, stopping at military kraals both nights. On the twentieth it split into two columns which made long parallel marches, and it spent the night in a hollow just to the north of Isipezi Hill. ... they moved the main impi up to the Nqutu plateau on the forenoon of the twenty-first, finding the deep ravine running north and south four miles from the head of the spur and bedding the regiments down in the course of the afternoon." They were discovered there by the British a bit later, largely by accident.

d. Based on maps in the source, I estimate that the impi moved 25 miles on the 25th and 10 miles on the 21st. Hence the following estimated itinerary.

	<u>Day</u>	<u>Miles</u>	<u>Km</u>
	17th	4	6.4
	18th	9	14.5
	19th	9	14.5
	20th	25	40.2
	<u>21st</u>	<u>10</u>	<u>16.1</u>
Total	5	57	92

Thus, I estimate an average of 11.4 mi/day or 18.4 km/day.

3. Comments: None

NEZ PERCE

1. Source:

- a. Title: The American Heritage History of the Indian Wars
- b. Author: Utley, Robert M. and Wilcomb E. Washburn
- c. Date: 1977
- d. Organization: American Heritage Publishing Co.

2. Notes:

- a. (pp 293-298) The pursuit of the Nez Percé indians started in May of 1877 and ended 5 October 1877. The following seven major engagements occurred during the pursuit.

<u>Date</u>	<u>Location</u>
17 June	Whitebird
11 July	Clearwater
9 August	Big Hole
20 August	Camas Creek
13 September	Canyon Creek
23 September	Cow Island
5 October	Bear Paw Mountains (surrender)

- b. Based on the maps and narrative given in the source, I estimate that the pursuit covered about 1,700 miles (2,736 km) and took about 95 days. This makes its average rate of travel 17.9 mi/day (28.8 km/day). The pursuers were on horse (US Cavalry). The indians were partly on foot.

3. Comments: None

OREGON TRAIL

1. Source:

- a. Title: Westward Vision: The Story of the Oregon Trail
- b. Author: Lavender, David
- c. Date: 1963
- d. Organization: McGraw-Hill Book Co., New York (Bethesda Library 978 L399w)

2. Notes:

a. Based on the maps and text, I estimate that the Oregon trail ran for about 2,000 miles (3,220 km) and that the average wagon train made about 11 mi/day (17.7 km/day). I further estimate that variations in speed around the average amounted to about a factor of two.

b. A typical wagon train had 1,000-1,500 people, 120 wagons, and 5,000 head of stock.

3. Comments: None

PONY EXPRESS

1. Source:

- a. Title: The New Encyclopaedia Britannica
- b. Author: Anonymous
- c. Date: 1974
- d. Organization: Encyclopaedia Britannica, Inc., Helen Hemingway Benton, Publisher, Chicago, IL

2. Notes: The Pony Express operated from April 1860 to October 1861, when the transcontinental telegraph was completed. It ran from St. Joseph, MO to Sacramento, CA, a distance of about 1,800 mi (2,900 km). The one-way time normally was 10 days. There were 157 stations, and riders changed horses six to eight times between stations.

3. Comments: None

SAVKIN-OPERATIONAL ART

1. Source:

- a. Title: The Basic Principles of Operational Art and Tactics (A Soviet View)
- b. Author: Savkin, Vasilii Y. (Translated and published under the auspices of the US Air Force)
- c. Date: 1974
- d. Organization: Superintendent of Documents, US Government Printing Office, Washington, DC

2. Notes:

a. (pp 57-59, *passim*) "The action of statistical laws in armed conflict arises as a result of a mass employment of personnel, combat equipment, and weaponry under approximately identical conditions, as well as with the manifold repetition of events, when certain attributes common to all of them are discovered."

"For example, indicators of the tempo of offensive operations conducted by the Soviet Army in the second half of the Great Patriotic War could differ to a considerable extent in each concrete case and for a particular combined arms or tank army, but still they varied about specific average values characteristic of combat actions of that period and for the conditions which were in existence by that time. Thus in operations of the second half of the war our combined-arms armies advanced with an average daily rate of 20-30 km and tank armies advanced with a rate of 25-50 km, and sometimes 80-100 km per day."

"The width of zones of advance of armies in the second half of the war varied from 7 to 145 km, but comprised 30-50 km on the average for a majority of the armies."

"The density of fire of small arms (bullets per minute per meter of defensive front) set up in front of the forward edge of defense varied from two to 12, but the average was 5-6."

"Statistical laws express the nature of unregulated, chaotic processes. For example, thermal, electromagnetic, and quantum movements are unregulated."

b. (p 108) "For example, in the Battle of the Marne in September 1914 (at that time there were no tanks), the average daily rate of advance of the attackers reached 6 km, but on individual days increased to 20-22 km a day. In the March offensive of the Germans in 1918—they had no tanks—the average rate of advance was 4-4.5 km a day. However, in the Amiens operation (August 1918), in spite of the participation of over 600 tanks, the allies achieved a rate of advance of only 3-3.5 km a day."

c. (pp 118-119) "During the November offensive of the fascist German troops, which was conducted in considerably more favorable conditions of the weather (the winter had not yet set in, there was not considerable snow cover, while the slight freeze bound the autumn mud), such as on the Dmitrov and Solnechnogorsk axes, they advanced an average of no more than 4-5 km a day. However, our troops, who attacked under incomparably more difficult conditions of a severe winter, achieved double the average rate of advance—10-12 km a day. It is necessary to take into account here that Hitlerite shock groupings consisted of tank and motorized *soyedineniya*, while the Soviet troops basically had rifle *chasti*."

d. (pp 136-137) "The rates of advance and troop losses also were inversely proportional."

"An analysis of the size of losses and expenditure of supplies of tank armies in nine operations of the Great Patriotic War attests that in an attack with a tempo of 20-50 km per day the overall losses in personnel were a little over three times less, and in tanks were almost 1 1/2 times less than with a tempo of advance of 4-10 km per day."

"Rates of advance have an even greater effect on the specific consumption of supplies per 100 km of troop advance. As can be seen in Table 1 [not reproduced here], with high rates of advance of tank armies the specific consumption of ammunition was decreased by six times, and that of diesel fuel by three times."

"The experience of combat operations of combined-arms armies also attests to a reduction in losses with an increase in rates of advance."

"Let us turn to the experience of two operations of Thirty-Ninth Army in 1944. In an operation conducted in February, Thirty-Ninth Army was attacking with a tempo of 0.5 km per day, and in the Vitebsk Operation—9 km a day. At the higher rates of advance in the Vitebsk Operation, losses in personnel of Thirty-Ninth Army were six times less than in the operation conducted in February, and losses of tanks were 20 times less."

"Rates of advance are not the only factor determining troop losses. The latter also depend on many causes and conditions, but rates of advance play a most important role. ..."

"It must be added that with high rates of advance there is a considerable increase in losses by the defending enemy. ..."

e. (p 114) "For example, during the attack by Fifth Army during the period from 15 through 27 October 1944, it suffered considerably greater losses in comparison with other combined-arms armies and other operations by this same army. In 12 days, the army advanced 30 km, with an average daily advance of 2.5 km. With each day of the operation the rate of advance dropped. On 17 October troops of this army advanced 4-10 km, on the 18th 3-6 km, on the 19th, 2.5 km, on the 20th and 21st 2 km each day, on the 23rd, 24th, 25th, and 26th one km daily, and on the 27th 0.5 km."

f. (p 174) "L. Varvarzhovskiy writes about World War II: 'During the war approximately 40 percent of the time was taken up with moving troops, about 30-35 percent for combat operations, and around 25-30 percent for rest, reinforcing, reforming, etc.' It should be noted that these figures are for rifle and infantry *soyedineniya*. The proportion of movements in the combat activity of our tank and mechanized corps was considerably higher."

3. Comments: None

SEARS

1. Source:

- a. Title: The Landscape Turned Red: The Battle of Antietam
- b. Author: Sears, Stephen W.
- c. Date: 1983
- d. Organization: Ticknor and Fields, New Haven and New York

2. Notes:

a. (p 56) "The Jackson legend grew during the Valley Campaign, where he marched his army twenty-five miles [40.23 km] and more a day and in mysterious ways, bewildering his foes and attracting an avid following among Southern newspaper readers."

b. (p 62) "[At the battle of Second Manassas] ... Old Jack [Stonewall Jackson] exhorted his 'foot cavalry' and they responded by covering fifty-four miles [86.90 km] in two days."

c. (p 124) "Even his [Stonewall's] foot cavalry could not cover sixty miles [96.56 km] in two days [in action around Harper's Ferry and Martinsburg]."

d. (p 195-197) [Re: A. P. Hill's march from Harper's Ferry to Sharpsburg] "Fifteen minutes later [i.e., at 0730 in the morning], at Harpers' Ferry, A. P. Hill's Light Division set off for Sharpsburg, seventeen miles [27.36 km] away. Lee's courier had reached Hill at 0630, and he had his men on the road within the hour. The pace was fast, and the march regulation of a ten-minute rest every hour that Jackson prescribed for his foot cavalry was ignored. Hill rode back and forth along the column exhorting his men."

e. (p 285-289) [Re: A. P. Hill's march from Harper's Ferry] "His Light Division's remarkable march from Harper's Ferry—seventeen miles [27.36 km] in less than eight hours—rivalled the best marks of Jackson's famous foot cavalry. That along the way Hill actually prodded laggards with the point of his sword is possibly apocryphal—probably the troop's two days of rest following the capture of Harper's Ferry had more to do with their achievement ... To be sure, uncounted hundreds were left by the roadside exhausted, and Hill then rushed his brigades into action piecemeal, ... It was at about 1530 hours that they [the Union's Ninth Corps under Burnside] first sighted enemy [i.e., Hill's Confederate] troops off to the south, moving toward the Ninth Corp's open flank ... it was close to 1630 hours, and the Ninth Corps was on the defensive and falling back."

f. (p 301-302) "The Federal troops who deserve the praise for commendable rapidity were the Pennsylvanians of Brigadier Andrew A. Humphrey's Fifth Corps division. This was a brand-new outfit, ... [This division] reached Frederick on September 16. The call to join the main army reached him shortly after two o'clock on the afternoon of the battle [17 September], and in the fashion of A. P. Hill he had his men on the road within the hour, ... Before ten o'clock that morning [18 September], after a hard night march of twenty-three miles [37.01 km], his division was in place in the [Union] army's reserve. More than that, he had lost only 600 of this 6,600 men to straggling."

3. Comments: None

SEVERIN

1. Source:

- a. Title: Retracing the First Crusade
- b. Author: Severin, Tim
- c. Date: 1989
- d. Organization: National Geographic, 176(1989), 3(Sep), 325-365

2. Notes:

a. (p 335) "Before us lay a journey that would carry us more than 3,000 miles [4,828 km] to the south and east across ten countries. Nine centuries earlier the same route had been followed by one of the most remarkable hosts in history—the warrior-pilgrims of the first crusade."

b. (p 341) "As Sarah and I soon learned, peasants marched faster than princes: Peter's [Peter the Hermit] motley followers averaged nearly 18 miles a day [28.97 km/day] on their way across Europe, while Godfrey's army managed only 15 1/2 miles [24.94 km/day]."

c. See maps, pp 334-335.

d. (p 341) "Our ride began in the courtyard of Godfrey of Bouillon's castle in Belgium. [Also] a year and a half later, as we trudged across the Middle East's Jordan valley in searing July heat"

e. (p 343) "Estimates of the crusaders' total numbers vary, from their own wildly exaggerated figure of hundreds of thousands to a more likely number of 4,000 or 5,000 mounted knights and squires and 30,000 foot soldiers, plus countless civilians."

f. (p 361) "When the pilgrims sighted the walls of Jerusalem on the seventh of June 1099,"

3. Comments: None

SIDORENKO

1. Source:

- a. Title: The Offensive (A Soviet View)
- b. Author: Sidorenko, A. A. (Translated and published under the auspices of the US Air Force)
- c. Date: 1974
- d. Organization: Superintendent of Documents, US Government Printing Office, Washington, DC

2. Notes:

a. (p 2) "Also very important is the circumstance that, as a rule, successfully attacking troops suffer fewer¹ losses than the defenders. Many examples may be presented in confirmation of this."

b. (p 11) "Along with this [increase of battle size and scale with time], the rates of the offensive increased continuously. In the First World War the average rates of attack did not exceed 4-6 km per day. The highest rate attained during the entire war was 18 km (the 7th German Army in the operation on the En River on 27 May 1918). [Ref. P. Varolomeyev, Udarnaya armiya (Shock Army), Moscow State Publishing House, 1933, p. 109] During the period of the Great Patriotic War, especially in the operations of 1944-45, the average rates of attack of the rifle troops reached 15-25 km per day and of the tank and mechanized troops—30-40 km per day (on individual days, 70-80 km). In the war with Japan in August 1945, the troops of the Transbaikal *Front* advanced 500-800 km in 10 days with an average rate of 50-80 km per day. The rate of attack of the 6th Guards Tank Army on individual days reached 100 km or more. [Ref. P. Rotmistrov, The Influence of Tanks on the Rates of Offensive Operations, Voenno-istoricheskii zhurnal (Journal of Military History), 1961, No. 1, p 14.]"

c. (p 12) "The increase in the rates of attack had an influence on reducing the duration of operations despite the increase in their depth. If, in 1944, large offensive operations of *front* groups lasted 40-80 days, in 1945 operations of the same depth continued for 20-30 days. The duration of *front* and army operations which, by the end of the war reached respectively 15-20 and 5-10 days, was reduced."

d. (p 81) "But in contrast to the [increase in] depth of the combat mission, as shown by the experience of the Great Patriotic War, the width of zone of advance had a clear tendency to decrease both on an operational and on a tactical scale. For example, while the width of zone of advance in the winter campaign of 1941/42 was 300-400 km on an average, in operations of 1944-45 it had decreased to 200-250 km. The width of the zone of advance of an army correspondingly decreased from 40-60 km to 20-40 km, and that of a rifle division from 4-6 km to 2 km. This was caused by the necessity to ensure creation of a decisive superiority in men and materiel over the enemy when breaking through his defense."

e. (p 156) "In the third period of the [Great Patriotic] war, when rates of attack rose and comprised up to 30-40 km on an average for tank and mechanized troops, and up to 15-25 km a day for rifle troops, the breakthrough of intermediate defensive positions was usually accomplished from the march."

3. Comments: None

¹ The original reads "more fuel," which evidently is a misprint. For, in addition to making no sense in context, it is flatly contradicted by the examples which immediately follow this passage.

SIMPKIN

1. Source:

- a. Title: Red Armour
- b. Author: Simpkin, Richard E.
- c. Date: 1984
- d. Organization: Pergamon Press, Ltd., Oxford

2. Notes:

a. (p 120) [With regard to operational "switches," not further clarified in the text] "But to my surprise none of the obvious factors—such as day or night, good roads of bad, dry weather or wet, even (as remarked earlier) the number of routes allocated—seemed to make any difference detectable as a pattern by eye, let alone [statistically] significant."

b. (p 122) Re: All-arms forces. "Formations were concentrated in a rear concentration area over 100 and up to 300 km behind the line of contact. They spent an average of 24 hours there and moved at an achieved speed of 10 km/hr to the forward concentration area 25 to 30 km behind the line of contact, where they spent up to 4 or 5 days. From there they moved to the assembly area (also the preparation area for an obstacle crossing) some 5 km behind the start line at an achieved speed of 5 km/hr. In the assembly area they spent either 20 to 30 hours or 10 to 12 hours, these alternatives presumably depending on the time of arrival in relation to a first light attack. Finally they moved to the start line at an achieved speed as low as 2.5 km/hr."

c. (p 122) "The second echelon tank forces in the sample moved on average 105 km from rear to forward concentration areas, taking some 12 hours at a real average speed of 10 km/hr. A 70 km move from there to the assembly area took 15 hours (5 km/hr); and a 25 km march forward to the pass-through or launch line took a further 12 hours (2.5 km/hr)."

d. (p 132) "The 100 km/day target with which NATO has loved to titillate its paranoia for three decades or so was laid down in the historic STAVKA directive, and the subsequent NKO Order No. 325 of 10 January 1942, covering the formation of tank and mechanised corps and their employment in the exploitation of penetrations along deep thrust lines. ... [Yet in WW II] the average for tank armies after breakthrough was barely half the target figure. More significant still, the highest individual figure I found, taken from an operation near the end of the war that was pretty well straight 'motoring,' is only 85 percent of target. ... The Israeli bogey rate for the Mitla stakes is about 130 km/day, and they established this with Centurion tanks, still with the British engine and having a maximum speed of only 37 km/hr."

3. Comments: None

THUTMOSE III

1. Source:

- a. Title: "The Story of Civilization: Part I—Our Oriental Heritage"
- b. Author: Durant, Will
- c. Date: 1954
- d. Organization: Simon and Schuster. NY

2. Notes: (p 154) "For twenty-two years the Queen [Hatshepsut] ruled in wisdom and peace; Thutmose III followed with a reign of many wars. Syria took advantage of Hatshepsut's death to revolt; it did not seem likely to the Syrians that Thutmose, a lad of twenty-two, would be able to maintain the empire created by his father [Thutmose III was the son of Thutmose I by a concubine]. But Thutmose set off in the very year of his accession, marched his army through Kantara and Gaza at twenty miles a day, and confronted the rebel forces at Har-Megiddo (i.e., Mt. Megiddo), a little town so strategically placed between the rival Lebanon ranges on the road from Egypt to the Euphrates that it has been the Ar-mageddon of countless wars from that day to General A. Allenby's. In the same pass where in 1918 the British defeated the Turks, Thutmose III, 3397 years before, defeated the Syrians and their allies. Then Thutmose marched victorious through western Asia, subduing, taxing and levying tribute, and returned to Thebes in triumph six months after his departure."

3. Comments:

- a. In a footnote to this passage, Durant remarks that "Allenby took twice as long to accomplish a similar result; Napoleon, attempting it at Acre, failed."
- b. It is interesting to note the reference to an advance rate of 20 mi/day (32.2 km/day) at this early date in history.

TUCHMAN

1. Source:

- a. Title: The First Salute
- b. Author: Tuchman, Barbara W.
- c. Date: 1988
- d. Organization: Alfred A. Knopf, New York

2. Notes:

a. (pp 208-209) [Re: Cornwallis, with at least 1,500 men in pursuit of Morgan through North Carolina in 1781, directly following the battle of Cowpens] "Recent heavy rains had made high water in the rivers and turned the roads into troughs of mud that sucked at the marcher's boots and slowed progress. ... Cornwallis' large Army, plowing heavily through the mud churned by Morgan's passage, was slowed and delayed by every river, but kept on coming. In steady rain mixed with snow, they were making no more than six miles [9.66 km] a day."

b. (pp 248-279) [Re: Washington's move from the vicinity of New York to Yorktown where he planned to confront Cornwallis. The crossing of the Hudson River took place 20 August 1781.] "Because of the limited and primitive roads of the period, and to ease the pressure of foraging on the countryside and to add to Clinton's [the British theater commander, headquartered in New York] uncertainty about the objective, the Allied Army [Continental and French], in two groups, took separate routes along two parallel lines. Foot soldiers covered fifteen miles [24.14 km, from the west bank of the Hudson] the first day, a distance that over the next two weeks remained about the daily average. ... They come next to Princeton ... After a 'very good breakfast' they push on to Trenton, having covered 45 miles [72.42 km] that day. ... Crossing the Delaware on September 1, the marchers arrived in Philadelphia the next day, having covered so far 133 miles [214.04 km]. ... From Philadelphia, the Army moved on toward Chester, in Pennsylvania, on the way to its destination at Head of the Elk, at the top of the northernmost inlet of Chesapeake Bay [where it was to be picked up by the French fleet and ferried to southern Virginia] ... When the Allied army marching down from Philadelphia arrived at Head of the Elk in Maryland on September 6, they found only empty wharves ... In bitter conference, the generals agreed to embark on the few boats at hand about 3,000 troops, 2,100 French and 800 Americans, and send the rest of the army on foot down the road to Baltimore 55 miles [88.51 km] away. ... Covering 20 miles [32.2 km] a day on this stretch, the men reached Baltimore on September 12. Here at last they found water transport."

3. Comments: None

VAN CREVELD

1. Source:

- a. Title: Supplying War
- b. Author: Van Creveld, Martin
- c. Date: 1977
- d. Organization: Cambridge University Press, Cambridge

2. Notes:

a. (p 112) "In theory, there was no reason why marching columns should not be able to sustain a steady fifteen miles a day, a figure that had not changed since time immemorial. However, this was being made increasingly difficult by the huge proportions of the trains. Between 1870 and 1914, the number of wagons on the establishment of each corps had more than doubled, from 457 to 1168, and this was quite apart from the often still greater amount of transport required to refill the troops' mobile reserves as they became depleted. Though the horse-drawn transport operating in the army's rear was capable of considerably outmarching the men (twenty-five miles per day being reckoned as a steady average), it was forever shuttling forward and backward between front and base and was therefore certain to fall further behind with every day's march."

b. (p 234) "... it appears that the maximum sustained speed of eighteenth-century armies was three miles per hour—the pace of a marching man—and that they were occasionally able to cover as much as fifteen miles per day for two or three weeks on end. As against their ratio of 1:5, modern vehicles—even tracked ones—can easily cover fifteen miles an hour, but no army, not even the British 'Blade Force' chasing Rommel in North Africa or Malinowsky's armoured columns in pursuit of the Japanese in Manchuria, has managed to sustain a pace of seventy-five miles a day for more than a very few days at a time."

c. (p 235) "It was demonstrated in the Israeli-Egyptian campaign of 1967 that not even an army operating under ideal conditions, enjoying complete superiority in the air and taking a second rate opponent by surprise, stands much chance of covering more than forty miles per day. ... the speed and range of successive new means of transport have been largely, if not completely, offset by the enormous increase in friction and, above all, by the quantities of supplies required. Hence, even if an entirely new and unprecedentedly effective means of transport were to appear tomorrow, it is to be expected that only a small fraction of its maximum theoretical capacity will ever be utilized in practice, and that its effect on the speed of mobile operations will therefore be marginal."

3. Comments: None

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APPENDIX C

BIBLIOGRAPHY OF WORKS CONSULTED

Andrews, Marshall, "Rates of Advance in Land Attack Against Unprepared Forces," ORO-TP-10, Operations Research Office, Bethesda, MD, August 1960. AD 243-938

Anonymous, "Columbia Encyclopedia," 3rd Ed, Columbia University Press, New York, 1968 (9th printing)

Anonymous, "Historical Atlas of the World," Barnes and Noble Books, New York, 1972

Anonymous, "The Forty-Niners," Time-Life Books, New York, 1974

Anonymous, "Dictionary of American History: Revised Edition," Charles Scribner's Sons, New York, 1976 (Reissue of 1940 edition)

Anonymous, "Encyclopedia Americana," International Edition, Americana Corporation, Danbury, CT, 1978

Anonymous, "Rand-McNally Road Atlas: United States, Canada, Mexico," Rand McNally & Co., Chicago, IL, 1987

Anonymous, "The Times Atlas of the World," 7th Edition, Times Books, Random House, New York, 1988

Anthony, Robert, "The Applicability of Fractal Distributions and Scaling Laws to Representations of Warfare," Institute for Defense Analyses, unpublished MS, Alexandria, VA, 1 March 1987

Atchison, J. and J. A. C. Brown, "The Lognormal Distribution," Cambridge University Press, Cambridge, UK, 1957

Barnett, Vic, "Comparative Statistical Inference," 2nd Ed., John Wiley & Sons, New York, 1982

Barraclough, Geoffrey (ed.), "The Times Concise Atlas of World History," Hammond, Inc., Maplewood, NJ 07040, 1985

Bekker, M. G., "Theory of Land Locomotion: The Mechanics of Vehicle Mobility," University of Michigan Press, Ann Arbor, MI, 1962 (2nd Printing)

Bekker, M. G., "Introduction to Terrain-Vehicle Systems," University of Michigan Press, Ann Arbor, MI, 1969

Berger, James O., and Thomas Sellke, "Testing a Point Null Hypothesis: The Irreconcilability of P Values and Evidence," Jour. of the Am. Statistical Association, 82(1987), 397(Mar), 112-139

Best, Robert J., "Analysis of Personnel Casualties in the 25th Infantry Division, 26-31 July 1950," ORO-T-22(FEC), Operations Research Office, 14 April 1952

Best, Robert J., "A Study of Battle Casualties Among Equivalent Opposing Forces (Korea, September 1950)," ORO-T-23(FEC), Operations Research Office, 1952

Best, Robert J., "Casualties and the Dynamics of Combat," RAC-TP-85, Research Analysis Corporation, March 1966, AD 372-260 (CONFIDENTIAL)

Böddeker, U. and J. Pantke, "Auswertung Historischer Konflikte zur Bestimmung von Vormarschraten [Evaluation of Historical Conflict to Determine Rates of Advance]," M-ZO 40113/08, Industrieanlagen-Betriebsgesellschaft mbH (IABG), Hauptabteilung ZO, OR-Stelle Trier für Zentrale Studien, Trevererstrasse 1, D-5500 Trier, FRG, 20 April 1978

CAA, "FEBA Movement and Attrition Processes," CAA-SP-75-1, US Army Concepts Analysis Agency, Bethesda, MD, 21 February 1975

CAA, "Analysis of Factors That Have Influenced Outcomes of Battles and Wars: A Data Base of Battles and Engagements," US Army Concepts Analysis Agency, Study Report CAA-SR-84-6, in six volumes, September 1984, prepared for CAA by the Historical Evaluation and Research Organization (HERO) under Contract Number MDA903-82-C-0363, available from the Defense Technical Information Center (DTIC) as follows:

<u>Volume No.</u>	<u>AD Number</u>
1	B-086-797L
2	B-087-718L
3	B-087-719L
4	B-087-720L
5	B-087-721L
6	B-087-722L

CAA, "CHASE Data Enhancement Study (CDES)," Historical Evaluation and Research Organization (HERO), Report Number 129, in five volumes, 31 January 1986. Prepared for US Army Concepts Analysis Agency (CAA) under Contract Number MDA903-85-C-0252. Available from DTIC as AD A-175-712, AD A-175-713, AD A-175-714, AD A-175-715, AD A-175-716

CAA, "Data Base Error Correction (DBEC)," unnumbered HERO report, 23 January 1987, prepared for CAA under Purchase Order Number MDA903-86-M-8560. AD A-176-750

CAA, "Independent Review/Reassessment of Anomalous Data (IR/RAD)," unnumbered LFW Management Associates, Inc. Report, 22 June 1987, in four volumes, prepared for CAA under Contract Number MDA903-86-C-0396, and available from DTIC as AD 195-381 (Volume I), AD 195-726 (Volume II), AD 195-382 (Volume III), AD 195-383 (Volume IV)

CAA, "Historical Characteristics of Combat for Wargames (Benchmarks)," Research Paper CAA-RP-87-2, US Army Concepts Analysis Agency, July 1988. AD 200-036

CAA, "Forced Changes in Combat Posture," unnumbered DMSI report, 30 September 1988, prepared for CAA by Data Memory Systems, Inc. under Contract No. MDA903-87-C-0807, and available from DTIC as AD A-201-405

CAA, "New Engagement Data for the Breakpoint Data Base," unnumbered DMSI report, 30 September 1988, prepared for CAA by Data Memory Systems, Inc. under Contract No. MDA903-87-C-0807. AD A-201-404

CAA, "The Ardennes Campaign Simulation Data Base (ACSDB): Phase II Draft Final Report (Deliverable 0002AK)," two volumes, prepared for US Army Concepts Analysis Agency by Data Memory Systems, Inc., 10392 Democracy Lane, Fairfax, VA 22030, under Contract No. MDA903-87-C-0787, 18 December 1989

Cain, MAJ Francis M. III, "Mobility Support of Offensive Maneuver: First US Army Attack on the Siegfried Line—1944," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, May 1985. AD B-099-171L

Casella, George, and Roger L. Berger, "Reconciling Bayesian and Frequentist Evidence in the One-Sided Testing Problem," *Jour. of the Am. Statistical Association*, 82(1987), 397(Mar), 106-111

CDEC, "Mobility Through Contaminated Areas Test (MOCAT)," CDEC-TR-81-001, US Army Combat Developments Experimentation Command, Fort Ord, CA 93941, January 1981. AD B-054-577

Chandler, David G., "The Campaigns of Napoleon," Macmillan Publishing Co., New York, 1966

Clausewitz, Carl von, "On War," Edited and Translated by Michael Howard and Peter Paret, Princeton University Press, Princeton, NJ, 1976

Cockrell, James K., "Prediction of Advances in Ground Combat," Conference on Modelling Land Battle Systems for Military Planning, Ottobrunn, Germany 1974

Cooper, William J., "Tracked Vehicle Road March Damage Analysis," MTMC-TE-82-4b-26, Military Traffic Management Command, 12368 Warwick Boulevard, Newport News, VA 23606, January 1984. AD B-080-078L

Cramer, Harald, "Mathematical Methods of Statistics," Princeton University Press. Princeton, NJ, 1946

Crow, Edwin L. and Kunio Shimizu (eds.), "Lognormal Distributions: Theory and Applications," Marcel Dekker, New York, 1988

Dallal, Gerard E., and Leland Wilkinson, "An Analytic Approximation to the Distribution of Lilliefors's Test Statistic for Normality," *The American Statistician*, 40(1986), 4(Nov), pp 294-296

Denison, LTC George T., "History of Cavalry: From the Earliest Times, With Lessons for the Future," Macmillan and Co., London, 1877

De Santis, MAJ Edward, "Manual War Gaming: An Historical Analysis of Combat Ratio Versus Rate of Advance," A Treatise Submitted to the Faculty of the United States Army Command and General Staff College, Fort Leavenworth, Kansas, 1972

Dick, Charles J., "The Operational Employment of Soviet Armour in the Great Patriotic War," AA18, Soviet Studies Research Centre, RMA Sandhurst, October 1988

Devries, LTC Paul T., "Maneuver and the Operational Art," US Army War College, Carlisle Barracks, PA 17013, April 1982. AD A-116-698

Dodge, Theodore Ayrault, "Alexander: A History of the Origin and Growth of the Art of War from the Earliest Times to the Battle of Ipsus, BC 301, With a Detailed Account of the Campaigns of the Great Macedonian," Houghton, Mifflin and Co., Boston and New York, 1898 (2nd Ed.). First Edition, 1890.

Dodge, Theodore Ayrault, "Hannibal: A History of the Art of War Among the Carthaginians and Romans Down to the Battle of Pydna, 168 BC, With a Detailed Account of the Second Punic War," Houghton, Mifflin and Co., Boston and New York, 1891

Dodge, Theodore Ayrault, "Caesar: A History of the Art of War Among the Romans Down to the End of the Roman Empire With a Detailed Account of the Campaigns of Julius Caesar," Houghton, Mifflin and Co., Boston and New York, 1900

Dodge, Theodore Ayrault, "Gustavus Adolphus: A History of the Art of War from Its Revival After the Middle Ages to the End of the Spanish Succession, With a Detailed Account of the Campaigns of the Great Swede, and of the Most Famous Campaigns of Turenne, Conde, Eugene and Marlborough," Houghton, Mifflin and Co., Boston and New York, 1895

Dodge, Theodore Ayrault, "Napoleon: A History of the Art of War, from Lützen to Waterloo, With a Detailed Account of the Napoleonic Wars," Houghton, Mifflin and Co., Boston and New York, 1904-1907. Reprinted by AMS Press, Inc., New York, NY, 1970

Douglas, Henry Kyd, "I Rode With Stonewall," University of North Carolina Press. Chapel Hill, NC, 1940

Douglass, Joseph D. Jr., "The Soviet Theater Nuclear Offensive," Vol. 1 of Studies in Communist Affairs, Supt. of Documents, US Government Printing Office, Washington, DC 20402, 1976

Dupuy, R. Ernest and Trevor N. Dupuy, "The Encyclopedia of Military History: From 3500 B.C. to the Present," Harper & Row, Publishers, New York, 1970

Dupuy, Trevor N., "Analysing Trends in Ground Combat," History, Numbers and War: A HERO Journal, Vol 1, No 2, Summer 1977, pp 77-91

Dupuy, Trevor N., "A Fallacy of American Combat Simulations: Rates of Advance are *Not* Proportional to Force Ratios," History, Numbers and War: A HERO Journal, Vol. 1, No. 2, Summer 1977, pp 103-114

Dupuy, Trevor N., "Some Facts About Advance Rates in War," Unpublished Manuscript, cites Dupuy's "Combat Advance Rate Verities," November 1982

Dupuy, Trevor N., and Paul Martell, "Great Battles on the Eastern Front: The Soviet-German War, 1941-1945," Bobbs-Merrill Co., Indianapolis, IN, 1982

Dupuy, Trevor N., et al., "Handbook of Ground Forces Attrition in Modern Warfare," Prepared by the Historical Evaluation and Research Organization, January 1986

Dupuy, Trevor N., "Can We Rely Upon Computer Combat Simulations?," Armed Forces Journal International, August 1987, pp 58-63

Durant, Will, "Our Oriental Heritage," Volume 1 of the series "The Story of Civilization," Simon and Schuster, New York, 1954 (page 154)

Eggenberger, "A Dictionary of Battles," Thomas Y. Crowell Co., New York, 1967

Egger, COL, "Briefing Materials on Advance Rates in BLUE DANUBE and Selected Other REFORGER Exercises," personal communication of 20 September 1989 to Dr. Robert L. Helmbold

Engels, Donald W., "Alexander the Great and the Logistics of the Macedonian Army," University of California Press, Berkeley and Los Angeles, CA, 1978.

Esposito, BG Vincent J. (ed.), "The West Point Atlas of American Wars," Vol. I (1689-1900), Vol. II (1900-1953), Praeger Publishers, New York, 1959

Fager, Charles E., "Selma, 1965: The March That Changed the South," Beacon Press, Boston, 1974 (2nd ed., 1985)

Fain, William W., Janice B. Fain, Leon Feldman, and Susan Simon, "Validation of Combat Models Against Historical Data." Professional Paper No. 27, Center for Naval Analyses, 1970

Falk, Stanley L., "Bataan: The March of Death," W. W. Norton & Co., New York, 1962

Feldman, L., and S. Simon, "Study of Land/Air Tradeoffs (SLAT)," Center for Naval Analyses, "Contract N00014-68-0-0091, in 9 volumes, 1970. Vol. 7: "Historical Data Base." Vol. 8: "The Relation of the Tactical Warfare Simulation Program to Historical Warfare." Vol. 9: "Statistical Analysis of the Korean War."

Fleming, COL Norwood W., "An Analysis of Combat Attrition and Intensity of War (CATIWAR) (U)," CAA Technical Paper CAA-TP-80-4, US Army Concepts Analysis Agency, Bethesda, MD, April 1980 (SECRET-NOFORN)

Freedman, D. A., "A Note on Screening Regression Equations," The American Statistician, 37, 152-155

Freedman, L. S. and David Pee, "Return to a Note on Screening Regression Equations," The American Statistician, 43, 279-282

Glantz, LTC David M., "August Storm: The Soviet 1945 Strategic Offensive in Manchuria," Leavenworth Papers No. 7, Combat Studies Institute, US Army Command and General Staff College, Fort Leavenworth, KS, February 1983

Glantz, LTC David M., "August Storm: Soviet Tactical and Operational Combat in Manchuria, 1945," Leavenworth Papers No. 8, Combat Studies Institute, US Army Command and General Staff College, Fort Leavenworth, KS, June 1983

Glantz, COL David M., "Deep Attack: The Soviet Conduct of Operational Maneuver," Soviet Army Studies Office, US Army Combined Arms Center, Fort Leavenworth, KS 66027, April 1987. AD A-194-151

Goad, Rex, "Prediction of Opposed Movement and Casualty Rates," Professional Paper STC-PP-75, SHAPE Technical Centre, The Hague, Netherlands, July 1973

Goad, Rex, "Predictive Equations for Opposed Movement and Casualty Rates for Land Forces," Professional Paper STC-PP-90, SHAPE Technical Centre, The Hague, Netherlands, August 1974, AD 921 726

Goad, Rex, "The Modelling of Movement in Tactical Games," Professional Paper STC PP-158, Operations Research Division, SHAPE Technical Centre, The Hague, Netherlands, April 1979, AD-B037 375 (Also published in "Operational Research Games for Defense," edited by Reiner K. Huber, Klaus Niemeyer, and Hans W. Hoffmann, R. Oldenburg, Munich and Vienna, 1979.)

Gould, A. H. and H. Gee, "An Analysis of Infantry Rates of Advance in Battle," British Army Operational Research Group (BAORG), Report No. 17/52, Dept. of the Scientific Adviser to the Army Council, November 1952

Griess, Thomas E. (ed.), "The West Point Military History Series: Atlas for the Arab-Israeli Wars, The Chinese Civil War and the Korean War," Avery Publishing Group Inc., Wayne, NJ, 1986

Gribbling, MAJ Richard H., "Soviet Attack Tempo: The Linchpin in Soviet Maneuver Doctrine," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, March 1988. AD A-192-586

Gross, CPT David F., "Logistics Implications of the Operational-Level Offensive," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, May 1984. AD B-090-292L

Gumbel, E. J., "Statistics of Extremes," Columbia University Press, New York, 1958

Gutwald, MAJ Rick, "Tactical Encirclement Reductions," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, December 1986. AD A-179-560

Hamilton, LTC Mark R., "Maneuver Warfare' Revisited: A Plea for Balance," US Army War College, Carlisle Barracks, PA 17013, April 1986. AD A-170-250

Hardison, David C., "Movement Rates--CEM VI," CAA Internal Memorandum, 1984

Hastings, N. A. J. and J. B. Peacock, "Statistical Distributions," Butterworths, London, 1975

Hazen, David W., "Role of the Field Artillery in the Battle of Kasserine Pass," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, 1973. AD B-061-564L

Hedges, Larry V. and Ingram Olkin, "Statistical Methods for Meta-Analysis," Academic Press, Orlando, FL, 1985

Heller, Charles E., and William A. Stofft (eds.), "America's First Battles: 1776-1965)," University Press of Kansas, 1986

HERO, "Opposed Rates of Advance of Large Forces in Europe (ORALFORE)," Historical Evaluation and Research Organization, 28 August 1972. AD 902-830

HERO, "Historical Evaluation of Barrier Effectiveness," Historical Evaluation and Research Organization, March 1974. AD A-050-781

HERO, "Combat Data Subscription Service," Volume I, No. 1, "The Manual," article on ORALFORE results, 1975

HERO, "A Survey of 'Quick Wins' in Modern War," Historical Evaluation and Research Organization, Fairfax, VA, October 1975. AD A-025-893

HERO, "A Study of Breakthrough Operations," Historical Evaluation and Research Organization, Fairfax, VA, October 1976. Also Defense Nuclear Agency Report No. 4124F. AD A-036-492

HERO, "Combat Data Subscription Service," Volume II, No. 1, data on rates of advance of German Moscow offensive in 1941 and Soviet counteroffensive in December-January 1942, Winter 1976

HERO, "Combat Data Subscription Service," Volume II, No. 3, data on Soviet force movement rates on the Baltic front in July 1944, and the Byelorussian front in June-August 1944, 1977

HERO, Combat Data Subscription Service, Volume II, No. 3, data on Byelorussian campaign of June 1944, 1977

HERO, Combat Data Subscription Service, Volume II, No. 4, data on Soviet force movement rates for the Vistula-Oder operation of January-February 1945, 1978

Hoaglin, David C., Frederick Mosteller, and John W. Tukey, "Exploring Data Tables, Trends, and Shapes," John Wiley & Sons, New York, 1985

Hoeffding, Oleg, "Troop Movements in Soviet Tactical Doctrine: An Annotated Translation," R-878-PR, The RAND Corporation, Santa Monica, CA 90406, November 1971

Horvath, William J., "A Statistical Model for the Duration of Wars and Strikes," Behavioral Science, v. 13 (January 1968), pp 18-28

Hulse, COL Allen D., "Movement," Combat Operations Research Group Staff Memorandum SM-22-CORG(ORO-OCAFF), Office Chief of Army Field Forces, US Army Continental Army Command, Fort Monroe, VA, 9 August 1954. (Reprinted in Wainstein, Leonard, "An Examination of the Hulse and Parsons Papers on Rates of Advance," Institute for Defense Analyses, Paper P-991, December 1973, AD 779-848.)

Iyengar, Satish and Joel B. Greenhouse, "Selection Models and the File Drawer Problem," *Statistical Science*, 1988, No. 1, 109-135

Jacob, Herbert, "Using Published Data," Sage Publications, Beverly Hills, 1984

"Jane's Armour and Artillery, 1988-89," Christopher F. Foss (ed.), Jane's Information Group, 163 Brighton Road, Coulsdon, Surrey, CR3 2NX, UK, 1988

"Jane's Military Logistics, 1989," Christopher F. Foss and Terry J. Gander (eds.), Jane's Information Group, 163 Brighton Road, Coulsdon, Surrey, CR3 2NX, UK, 1989

Johnson, N. L. and S. Kotz, "Distributions in Statistics: Continuous Univariate Distributions—1," Houghton-Mifflin, Boston, 1970

Jones, James Pickett, "Yankee Blitzkrieg: Wilson's Raid Through Alabama and Georgia," The University of Georgia Press, Athens, GA, 1976

Kendall, Maurice G., and Alan Stuart, "The Advanced Theory of Statistics," Hafner Publishing Co., New York, 1967-1968

Kindsvatter, MAJ Peter S., "An Appreciation for Moving the Heavy Corps--The First Step in Learning the Art of Operational Maneuver," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, May 1986. AD A-174-132

Kohn, George C., "Dictionary of Wars," Anchor Books (Doubleday), Garden City, New York, 1987

Krupchenko, MAJ-GEN I., "The Organization and Execution of Marches Using Tank and Mechanized Formations During the Great Patriotic War," FSTC-HT-1401-84. US Army Foreign Science and Technology Center, 220 Seventh St., NE, Charlottesville, VA 22901, December 1984. AD B-090-808

Laffin, John, "Brassey's Battles: 3,500 Years of Conflict, Campaigns and Wars from A-Z," Brassey's Defence Publishers, London, 1986

Larionov, V., N. Yeronin, B. Solovyov, and V. Timokhovich, "World War II: Decisive Battles of the Soviet Army," Progress Publishers, Moscow, 1984. Translated from the Russian by William Biley

Lavender, David, "Westward Vision: The Story of the Oregon Trail," McGraw-Hill, New York, 1963

Lawrence, R. J., "The Lognormal Distribution of the Duration of Strikes," *J. R. Statist. Soc. A* (1984), v. 147, Part 3, pp 464-483

Light, Richard J. and David B. Pillemer, "Summing Up: The Science of Reviewing Research," Harvard University Press, Cambridge, MA, 1984

Lindley, D. V. and A. M. Skene, "Predictive Relationships for Opposed Movement and Casualty Rates for Land Forces," unpublished memorandum from Department of Statistics and Computer Science, University College London, to Dr. Rex Goad of the SHAPE Technical Centre, 24 January 1976.

Losik, O. A. (ed.), "Stroityel'stvo i Boyevoye Primeneniye Sovyetskikh Tankovykh Voysk v Gody Velikoy Otechyestvennoy Voyny [Organization and Tactical Employment of Tank Forces in the Years of the Great Patriotic War]," Order of the Workers of the Red Star, Military Publishing House, Ministry of Defense, USSR, Moscow, 1979

Louer, Philip E., et al., "Conceptual Design for the Army in the Field Alternative Force Evaluation CONAF Evaluation Model IV: Part III - User's Handbook," OAD-CR-60, Prepared for the Department of the Army, Contract DAHC19-69-C-0017, General Research Corporation, McLean, VA, December 1974

Love, J. Duncan, "Artillery Usage in World War II," Vol II, Technical Memorandum ORO-T-375, Operations Research Office, Bethesda, MD, April 1959. AD-208 021

McCreight, R. D., "The Mongol Warrior Epic: Masters of Thirteenth Century Maneuver Warfare," June 1983. AD A-136-620

McFarlan, Donald, and Norris D. McWhirter (eds.), "1990 Guinness Book of World Records," Sterling Publishing Co., Inc., New York, October 1989.

Mader, D. W., "A Review of the Origin and Development of Movement Rates Used in Army War Games," Internal Memorandum, Research Analysis Corporation, May 1971. (Also published in "Review of Selected Army Models," US Dept. of the Army, May 1971.)

Marshall, BG S. L. A., "Commentary on Infantry Operations and Weapons Usage in Korea: Winter of 1950-51," ORO-R-13, Operations Research Office, 27 October 1951. AD-342

Marshall, BG S. L. A., "Swift Sword: The Historical Record of Israel's Victory, June 1967," American Heritage Publishing Co., New York, 1967

Messing, Phillip H., "Force Comparison Model Description," MTR-82C00001, The MITRE Corporation, Metrek Division, McLean, VA, June 1982. (Done for Dept. of the Army under Contract No. F19628-82-C-00001.)

Mock, MAJ David C., "A Look at Deep Operations: The Option of Deep Maneuver," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, December 1987. AD A-191-405

Mood, Alexander McFarlane, "Introduction to the Theory of Statistics," McGraw-Hill Book Co., New York, 1950

Moody, Ralph, "Stagecoach West," Thomas Y. Crowell Co., New York, 1967

Morris, Donald R., "The Washing of the Spears: A History of the Rise of the Zulu Nation Under Shaka and Its Fall in the Zulu War of 1879," Simon & Schuster, NY, 1965

Morris, LTC John W., "Combat Engineers, Mobility, History, AirLand Battle." US Army War College, Carlisle Barracks, PA 17013, March 1987. AD A-180-416

Mulholland, R. P., and R. D. Specht, "The Rate of Advance of the Front Line in Some World War II Campaigns," RAND Memorandum RM-1072, The RAND Corporation, Santa Monica, CA, 16 April 1953

Murphy, COL Joseph B., et al., "Opposed Movement Rates," Draft US Army Concepts Analysis Agency Staff Paper, Draft CAA-SP-75-xx, 15 May 1975

Natkiel, Richard, "Atlas of American Wars," Arch Cape Press, 1986

Newark, Peter, "Cowboys," Exeter Books, New York, 1983

Novikov, MAJ-GEN Yu Z. and COL F. D. Sverdlov, "Maneuver in Combined Arms Combat (Manevr v Obshchevoyskovom Boyu)," USAMIIA-J-8454, US Army Medical Intelligence and Information Agency, Fort Detrick, MD 21701, April 1971. AD B-050-445L

O'Ballance, Edgar, "The Third Arab-Israeli War," Archon Books, Hamden, CT, 1972

Orr, Robert T., "Animals in Migration," Macmillan Co., London, 1970

Overholt, John L., "Fitting Korean War Data by Statistical Methods," Professional Paper No. 32, Center for Naval Analyses, Arlington, VA, 5 May 1970. AD 705-349

Overholt, J. L., et al., "Study of Land/Air Tradeoffs, Volume IX: Statistical Analysis of Korean War Data—Spring 1951," Study No. 64, Naval Warfare Analysis Group, Center for Naval Analyses, Arlington, VA, April 1970. AD 869-481

Palsokar, R. R., "Modern Application of Liddell Hart's Doctrine on Infantry Tactics," June 1983. AD A-136-622

Parsons, LTC Norman W., "Military Unit Rates of Advance in Attack," Combat Operations Research Group Staff Memorandum SM-29-CORG(ORO-OCAFF), Office Chief of Army Field Forces, US Army Continental Army Command, Fort Monroe, VA, 14 September 1954. (Reprinted in Wainstein, Leonard, "An Examination of the Hulse and Parsons Papers on Rates of Advance," Institute for Defense Analyses, Paper P-991. December 1973, AD 779-848.)

Patel, Jagdish K., C. H. Kapadia, and D. B. Owen, "Handbook of Statistical Distributions," Volume 20 in the Series Statistics: Textbooks and Monographs, Marcel Dekker, Inc., New York, 1976

Pearsall, Edward S., "Casualty Rates and Opposed Advance," Institute for Defense Analyses, Improved Methodologies for General Purpose Planning (New Methods Study), Working Paper No. 11, January 1972

Pearson, MAJ Craig H., "The Relationship of Depth and Agility: Historical Cases and Observations Relevant to NATO's Present Dilemma," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, May 1986. AD A-174-162

RAC, "Division Operations Model," RAC-R-36, Research Analysis Corporation, January 1968

RAC, "Determination of the Relation Between Mobility and Combat Effectiveness By Historical Analysis," Volume IV of Analysis of Fundamental Relations in Army Mobility Systems, RAC-TP-268, Research Analysis Corporation, McLean, VA, February 1968

RAC, "Methodology for Force Requirements Determination (MEFORD)," RAC-R-121, Research Analysis Corporation, McLean, VA, May 1971. AD 515-716L [Especially Appendix G, "An Examination of Rates of Advance as a Function of Force Ratios for Ground Combat War Games," by C. A. Warner]

Radzievskii, A. I., Prof. Army General, "Tankovyi Udar: Tankovaya Armiya V Nastupatelnoy Operatsii Fronta Po Opvitu Velikoi Otechestvennoi Voini [Tank Attacks: Tank Armies in Offensive Operations of the Front in the Experience of the Great Patriotic War]," Order of the Workers of the Red Banner, Military Publishing House, Ministry of Defense, USSR, Moscow, 1977

Rao, C. Radhakrishna, "Linear Statistical Inference and Its Applications," John Wiley & Sons, New York, 1965

Record, Jeffrey, "Armored Advance Rates: A Historical Inquiry," Military Review, September 1973

Resnick, MAJ Al, Jim Schneider, Melinda Sanders, "Division Map Exercise (DIME 4.0), Vol. 1, Game Protocol," Technical Report CAORA/TR-2184, Combined Arms Operations Research Activity, Fort Leavenworth, KS 66027, May 1985. AD B-101-453L

Reznichenko, Vasiliy Gerasimovich, Ivan Nikolayevich Vorobyev, and Nikolay Fedorovich Miroshnichenko, "Tactics," Voenizdat, Moscow, 1987

Richardson, R. P., et al., "An Analysis of Recent Conflicts," CNA Research Contribution No. 144, Center for Naval Analyses, Alexandria, VA, January 1966

Richardson, LTC Sterling R., "The Normandy Campaign: Firepower at the Operational Level," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, May 1987. AD A-192-832

RMC, James K. Cockrell and Donn Carter, "Research Study on Predictive War Game Factors," RMC Research Corporation, 7910 Woodmont Ave, Bethesda, MD 20814, March 1974 (Contract C.72-03 with SHAPE Technical Centre)

Robinson, E. Y., "Estimating Weibull Parameters for Materials," National Aeronautics and Space Administration, Technical Memorandum 33-580, Jet Propulsion Laboratory, Pasadena, CA, 15 December 1972

Robinson, J. H. and T. C. Dean, "Tactical Mobility Study," Waterways Experiment Station, WES/TR/GL-84-11, Corps of Engineers, Vicksburg, Mississippi, September 1984. AD B-087-564L

Rowland, David and D. Watson, "The Pace of Operations: Maximum Unopposed Rates of Advance," Working Paper 670/7, Defense Operational Analysis Establishment, United Kingdom, April 1988

Savkin, COL Vasiliy Yefisovich, "Tempy Nastupleniya [Rates of Advance]" (in Russian), Military Publishing House, Ministry of Defense, Moscow, 1965

Savkin, V. Ye., "The Basic Principles of Operational Art and Tactics (A Soviet View)," Moscow, 1972. No. 4 of Soviet Military Thought, translated and published under the auspices of the US Air Force and published by the US Government Printing Office, Washington, DC, 1974

Schäfer, Alfred, "Zur Ermittlung Funktionaler Zusammenhänge Zwischen Bewegungsgeschwindigkeit und Verlustraten Militärischer Verbände im Gefecht [Determination of the Functional Relation Between the Speeds of Movement and the Loss-Ratios of Military Units in Battle]," Graduate Dissertation, ID No. 03-77, Hochschule der Bundeswehr München, 9 June 1977

Schaefer, James Arthur, "The Tactical and Strategic Evolution of Cavalry During the American Civil War," Doctoral Dissertation, University of Toledo, June 1982

Sears, Stephen W., "The Landscape Turned Red: The Battle of Antietam," Ticknor & Fields, New Haven & New York, 1983

Severin, Tim, "Retracing the First Crusade," National Geographic, 176(1989), 3(Sep), 326-365

Shunk, David A., "Field Marshall von Manstein's Counteroffensive of Army Group South, February-March 1943: The Last Operational Level Victory of the Panzer Forces on the Eastern Front," June 1986. AD A-172-534

Sidorenko, A. A., "The Offensive (A Soviet View)," Moscow, 1970. No. 1 of Soviet Military Thought, translated and published under the auspices of the US Air Force by the US Government Printing Office, Washington, DC, 1974

Sikes, MAJ James E., "Kharkov and Sinai: A Study in Operational Transition," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, April 1988. AD A-202-271

Simpkin, Richard E., "Red Armour: An Examination of the Soviet Mobile Force Concept," Brassey's Defence Publishers, Oxford, 1984

Simpkin, Richard E., "Race to the Swift," Brassey's Defence Publishers, Ltd., London, 1985

Smith, E. G. and G. N. Donovan, "Trends in Warfare," Memorandum No. F-6, British Army Operational Research Group, April 1955. (RFSTRICED)

Snodgrass, LTC James G., "Operational Maneuver from the American Civil War to the OMG (Operational Maneuver Group): What are Its Origins and Will It Work Today?," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, February 1988. AD A-196-036

Snyder, Gerald S., "In the Footsteps of Lewis and Clark," National Geographic Society, Washington, DC 1970

Steele, Matthew W., "American Campaigns," Office, Chief of Staff, War Department, 1909. (Republished by the Military Service Publishing Co., Harrisburg, PA, 6th printing 1949.)

Steiger, Rudolf, "Panzertaktik im Spiegel Deutscher Kriegstagebücher, 1939-1941 [Tank Tactics as Reflected in the German War Diaries, 1939-1941]," Verlag Romberg, Freiburg, Federal Republic of Germany, 1973

Stuart, MAJ H. Paul, "Operational Maneuver: Creator of the Decisive Point," School of Advanced Military Studies, USAC&GSC, Fort Leavenworth, KS 66027, May 1987. AD A-185-078

Triandafillov, V. K., "Nature of the Operations of Modern Armies," Moscow-Leningrad, 1929, Translated by William A. Burhans, provided by Soviet Army Studies Office, Fort Leavenworth, KS

TRADOC Historical Office, "Historical Data on Speeds of March: Chancellorsville. St. Vith, Hammelburg Raid," 14 October 1976, provided by Office of the Command Historian, HQ US Army Training and Doctrine Command, Fort Monroe, VA 23651-5000

TRADOC Historical Office, "Historical Data on Speeds of March: 2nd Infantry Division Chateau-Thierry Belleau Wood," 19 October 1976, provided by Office of the Command Historian, HQ US Army Training and Doctrine Command, Fort Monroe, VA 23651-5000

Tuchman, Barbara W., "The First Salute," Andrew A. Knopf, New York, 1988

Tufte, Edward R., "The Visual Display of Quantitative Information," Graphics Press, Box 430, Cheshire, CT 06410, 1983

Tukey, John W., "Sunset Salvo," The American Statistician, 40(1986), 1(Feb), pp 72-76

Utley, Robert M., and Wilcomb E. Washburn, "The American Heritage History of the Indian Wars," American Heritage Publishing Co., New York, 1977

US Army, US Army Field Manual FM 30-40, "Handbook on Soviet Ground Forces," Headquarters, Department of the Army, 30 June 1975

US Army, US Army Field Manual FM 100-5, "Operations," Headquarters, Department of the Army, May 1986

Van Creveld, Martin, "Supplying War: Logistics from Wallenstein to Patton," Cambridge University Press, Cambridge, 1977

Vegetius (Flavius Vegetius Renatus), "The Military Institutions of the Romans," circa 380 AD, Trans. by LT John Clark, Stackpole Books, Harrisburg, PA 1960 (Reprinted July 1965 by the Telegraph Press, Harrisburg, PA)

Voevodsky, John, "A Mathematical Representation of Time-Variant Quantitative Behavior," Journal of Psychology, v. 68(1968), pp 129-140

Voevodsky, John, "Quantitative Behavior of Warring Nations," Journal of Psychology, v. 72(1969), pp 269-292

Voevodsky, John, and S. L. Waleszcak, "Quantitative Analysis of the Vietnam War Through 30 June 1969," submitted to the Military Operations Research Symposium for General Sessions Consideration, 27 February 1970

Voevodsky, John, "Crisis Waves: The Growth and Decline of War-Related Behavioral Events," Journal of Psychology, v. 80(1972), pp 289-308

Wachter, Kenneth W., "Disturbed by Meta-Analysis?," Science, 16 September 1988, 1407-1408

Wainstein, Leonard., "Some Allied and German Casualty Rates in the European Theater of Operations," P-989, Institute for Defense Analyses, Arlington, VA, December 1973. AD 779-850

Wainstein, Leonard., "Rates of Advance in Infantry Division Attacks in the Normandy-Northern France and Siegfried Line Campaigns," P-990, Institute for Defense Analyses, Arlington, VA, December 1973. AD 779-882

Wainstein, Leonard, "An Examination of the Parsons and Hulse Papers on Rates of Advance," Paper P-991, Institute for Defense Analyses, December 1973. AD 779-848

Wainstein, Leonard, "Major Front Movements and the Role of Armored Forces," Paper P-1784, Institute for Defense Analyses, June 1984

Weiss, Herbert K., "Stochastic Models for the Duration and Magnitude of a 'Deadly Quarrel,'" Operations Research, v. 11(1963), pp 101-121

Weiss, Herbert K., "Combat Models and Historical Data: The U.S. Civil War," Operations Research, v. 14(1966), pp 759-790

Wiley, MAJ Bell I. and CPT William P. Govan, "History of the Second Army," Study No. 16, The Army Ground Forces, Historical Section, The Army Ground Forces, 1946. AD A-954-996

Wilks, Samuel S., "Mathematical Statistics," John Wiley & Sons, New York, 1962

Willoughby, Charles, "Maneuver in War," Military Service Publishing Co., Harrisburg, PA, 1939. (Reprinted November 1983 by US Army War College, Carlisle, PA.)

Wilson, Dick, "The Long March, 1935: The Epic of Chinese Communism's Survival," Penguin Books, New York, NY, 1982. (Originally published by Hamish Hamilton, Ltd., London, 1971.)

Wolf, Fredric M., "Meta-Analysis: Quantitative Methods for Research Synthesis," Sage Publications, Beverly Hills, CA, 1986

• Xenophon, "The Persian Expedition." Translated by Rex Warner, Penguin Books. New York, NY, 1947

Young, CPT J. M., "River Crossings in the Face of the Enemy," Report No. 530, US Army Engineer Board, Fort Belvoir, VA, April 1938. AD B-957-772L

✓ Zimmerman, R. E., Donald Mader and Lawrence J. Dondero, "Review of the ATLAS Logic," presented at the DA "FEBA Movement Seminar," 28 January 1971

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**A COMPILATION OF DATA ON RATES
OF ADVANCE IN LAND COMBAT
OPERATIONS**

**SUMMARY
CAA-RP-90-4**

THE REASON FOR PERFORMING THIS STUDY was that a systematic compilation and description of the available statistical data is needed for work on rates of advance. Unfortunately, these data are widely scattered and often hard to get. We are not aware of any other work that covers this area as thoroughly as this Research Paper does.

THE STUDY SPONSOR was the Secretary of the Army. This is the second paper to be prepared by Dr. Robert L. Helmbold under his Secretary of the Army Research and Study Fellowship, and a third on the analysis of these data is planned.

THE STUDY OBJECTIVE was to provide the Army with a useful compilation and description of the important statistical data on rates of advance in land combat operations. This compilation makes them conveniently available to military historians and operations researchers. As such, it furnishes a valuable resource for further work in this important field.

THE SCOPE OF THE STUDY was intended to be comprehensive, in the sense of including all of the noteworthy work in this area. It is, no doubt, too much to hope that the paper includes literally all of the useful data. Nevertheless, this compilation should be very helpful to military historians and operations researchers. Counting earlier statistical tabulations that it includes or supersedes, over 30 databases are encompassed by those given in Appendix A. In addition, some anecdotal information that did not lend itself to statistical tabulation is provided in Appendix B.

THE MAIN ASSUMPTION of this paper is that no work that would substantially alter its principal findings has been overlooked.

THE BASIC APPROACHES used in this study were:

- a. To obtain through extensive personal visits, correspondence, and phone calls all of the noteworthy documents with statistical data on rates of advance, and then to
- b. Compile, computerize, describe, critique, and comparatively review them.

THE PRINCIPAL FINDINGS of the work reported herein are:

- a. A lot of statistical data on rates of advance in land combat operations is available.
- b. Some past work uses *ad hoc* descriptors and terminology. This makes comparisons difficult.
- c. Some past work made mistakes in figuring elapsed times from calendar dates and/or times of day; some even made mistakes in computing rates from distances and elapsed times.
- d. Appreciable difficulties for future quantitative work have been created by the use of subjective/qualitative descriptors not defined in terms of objectively measurable quantities (e.g., the use of such subjective/qualitative descriptors as "intensity of enemy opposition," "degree of difficulty of the terrain," and the like).

e. Several sources, some intentionally and others unintentionally, tended to select cases of a successful advance by the attacker. This biases the data against successful defensive efforts and in favor of advances by attackers.

f. Reported distances usually are shorter than the actual distances moved, because reported distances tend to be:

- (1) From point to point rather than along the actual paths taken, or
- (2) For displacements of the front line and not of the units involved.

g. Reported times usually are longer than the times actually "in motion," because reported times tend to:

- (1) Include pauses and halts, and to be
- (2) Rounded up to whole days.

h. Because of the tendency for reported distances to be shorter and times longer than actual, rates based on them tend to be lower than actual rates of advance.

THE STUDY EFFORT was directed by Dr. Robert L. Helmbold, Office, Special Assistant for Model Validation.

COMMENTS AND SUGGESTIONS may be sent to the Director, US Army Concepts Analysis Agency, ATTN: CSCA-MV, 8120 Woodmont Avenue, Bethesda, Maryland, 20814-2797.